1870 Vol. XLVI

OCTOBER 26th, 1944

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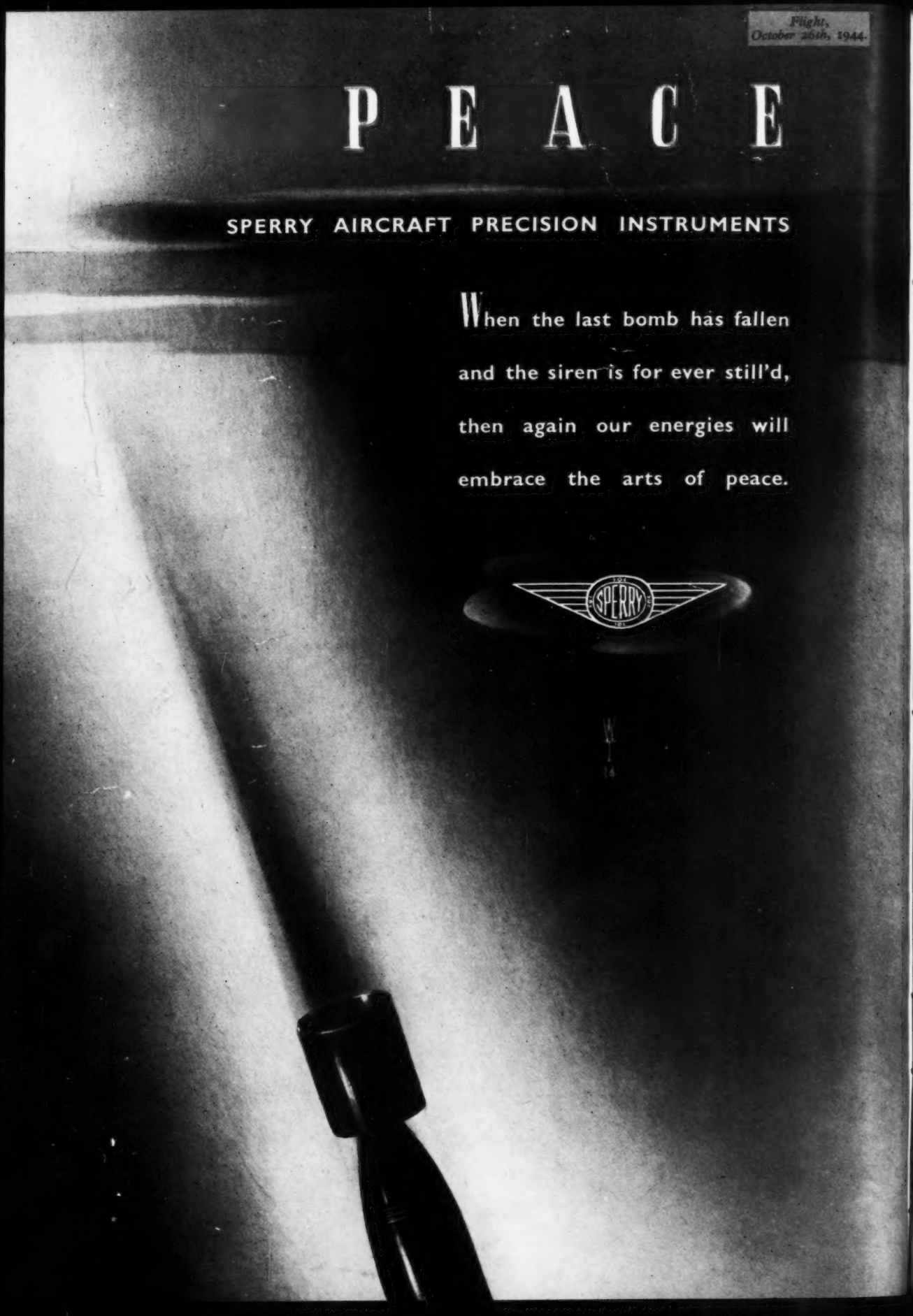
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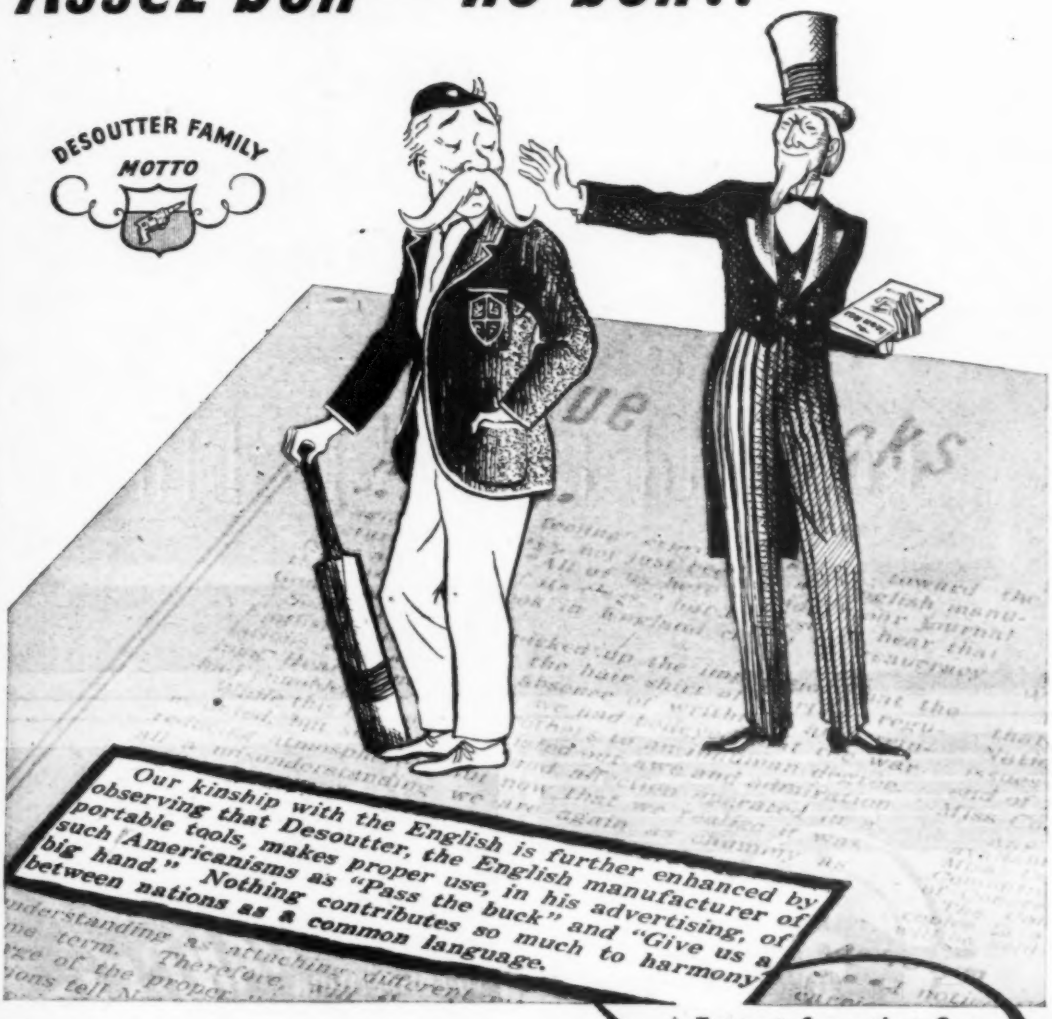
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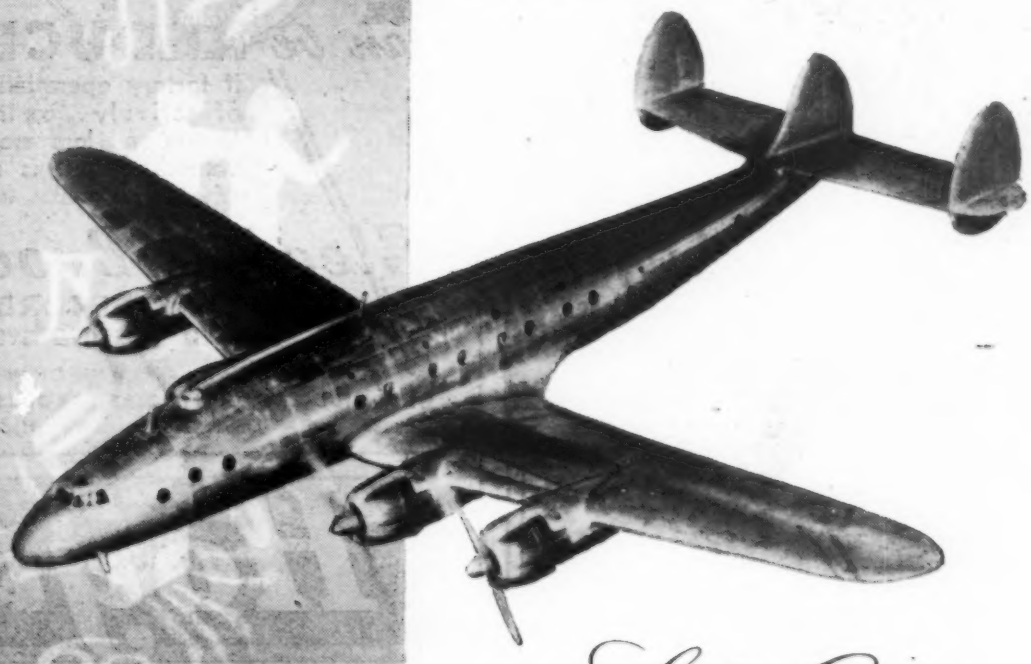

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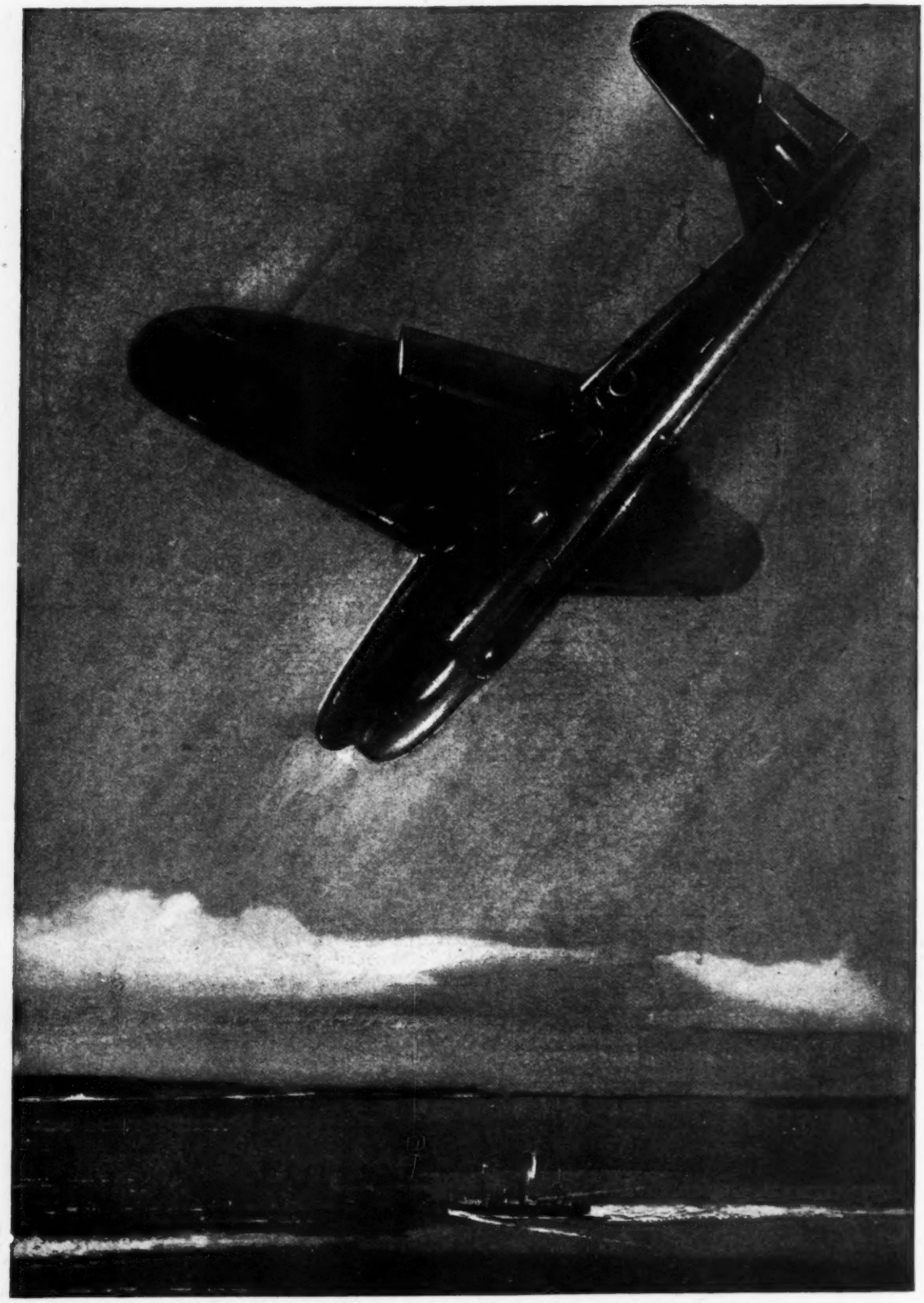

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AIRCRAFT ENGINEER

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The Outlook

With Air Help and Without

THE record of telephone conversations between German Generals on and after D-Day confirms the claim of Air Chief Marshal Sir Trafford Leigh-Mallory that without our Air Forces our Armies could never be where they are now. When it was known that the Allies had landed in Normandy every German General urgently demanded reinforcements, and almost invariably asked especially for air support. General Dollman, of the 7th German Army, who had been ordered to annihilate the Allies by the evening of D-Day, and had briefly replied that that was not possible, presently rang up Rommel and said that he had repeatedly asked for air support and had received nothing; without it he was helpless. Similar demands for air support poured in from other Generals. Rommel told Dollman that the units of the *Luftwaffe* were changing stations but would shortly be available.

No General likes to undertake an attack on an enemy of whose strength he is entirely ignorant. Reconnaissance is a necessary preliminary to every military operation, and in these days reconnaissance means aircraft. Even aircraft are of little use unless they can get within sight of the enemy, but on D-Day the outer ring of Spitfires made approach to within sight an extremely hazardous operation.

Again, had German bombers been present in strength, and had they been able to force their way through the protective screen of fighters, they might have done incalculable damage to the landing forces. But whether the *Luftwaffe* units were changing stations or not (and it seems unlikely that they would all have been moving at the same time) the German Army was left without air support of any kind.

What tremendous help the Allied Expeditionary Air Force gave to the Army was well told by its late A.O.C.-in-C. in a discourse which is reported on another page of this issue. It was confirmed by Himmler in his proclamation to the German people. Except, perhaps, in the case of the 14th Army in Burma, there has never been a more striking case of air help making all the difference to a land force than the invasion of France. The plight of the German forces, who had not sufficient help from the air, completes the picture.

British Air Policy

"HE was cabined, cribbed and confined in such a way that nothing could be done." This expression was used by Lord Londonderry about the Lord Privy Seal in the recent debate in the House of Lords, but it might well be applied to Parliament in connection with the White Paper on the British Government's policy on international aviation. Members of the House of Commons were indignant, and justifiably so, at the manner in which the Government has forestalled any possibility of a sensible debate on policy before our representatives go to the Chicago conference. First a Minister for Civil Aviation was sprung on the country, a step for which there was no serious demand, and then came the White Paper (which we publish in this issue) outlining the stand which British delegates to the Chicago conference are expected to take, headed by Lord Swinton, who will have had no time in which to make a proper study of the intricacies of the problems. In other words, and not to mince matters, British representatives are going or have gone to this momentous conference with a hastily concocted and unconsidered Government policy which is certainly not the agreed policy of the country, and which will be championed by a team headed by a Noble Lord who cannot

possibly know his subject, owing to the insufficient time allotted him in which to prepare himself.

Evidently the Government realises the insecurity of its policy, for the White Paper ends with the following admission: "The proposals are of a preliminary nature and may be modified in the light of views expressed by other countries." It would appear that Lord Swinton will be in the position of the candidate for election who, after explaining his policy, said to the electors: "Them's my sentiments, gentlemen. If you don't like them they can be altered." Sir Arthur Sinclair had to admit in the House that Lord Swinton has not even been consulted about the policy which he is to argue. The position would be ludicrous if it were not so serious.

Captain Harold Balfour, replying for the Government during the Supply Committee debate on October 20th, said the White Paper had the agreement of Empire Governments, and that Lord Swinton "would have ample time to study the situation and be present at Chicago." We wish we could share the optimism of the Under-Secretary. The White Paper rock on which the split is likely to occur at Chicago is the same as that which prevented Mr. Berle and Lord Beaverbrook from reaching agreement in London some months ago: the control of routes, frequencies and fares by an international authority. America is not in the least likely to change her views on that subject.

The College of Aeronautics

HAVING taken part in the advocacy of the need for adequate technical training, *Flight* is naturally pleased to learn from Sir Stafford Cripps that the Government has "accepted in principle" the establishment of a College of Aeronautics. At the moment of going to press the report of the Fedden Committee has not been published, and thus we are unable to judge as to whether or not the provisions contemplated are adequate for the purpose. In view of the vital importance to the nation of having ample staffs of highly trained technicians, it would be lamentable if cheese-paring methods were to be applied.

We believe we are right in saying that at first the Aeronautical Research Committee was inclined to cut down on the proposals of the committee presided over by Sir Roy Fedden, but that ultimately it "gave in." In this connection it is interesting, and perhaps not without significance, that Sir Henry Tizard, formerly chairman of the Aeronautical Research Committee, told the Parliamentary and Scientific Committee, as we recorded last week, that we ought to produce aircraft which were the "highest achievement of the engineer's art," and that a block grant of £1 million a year ought to be given to his suggested Aeronautical Research Council. If Sir Henry held those views while he was chairman of the Aeronautical Research Committee, we may hope that the College of Aeronautics will be adequately endowed.

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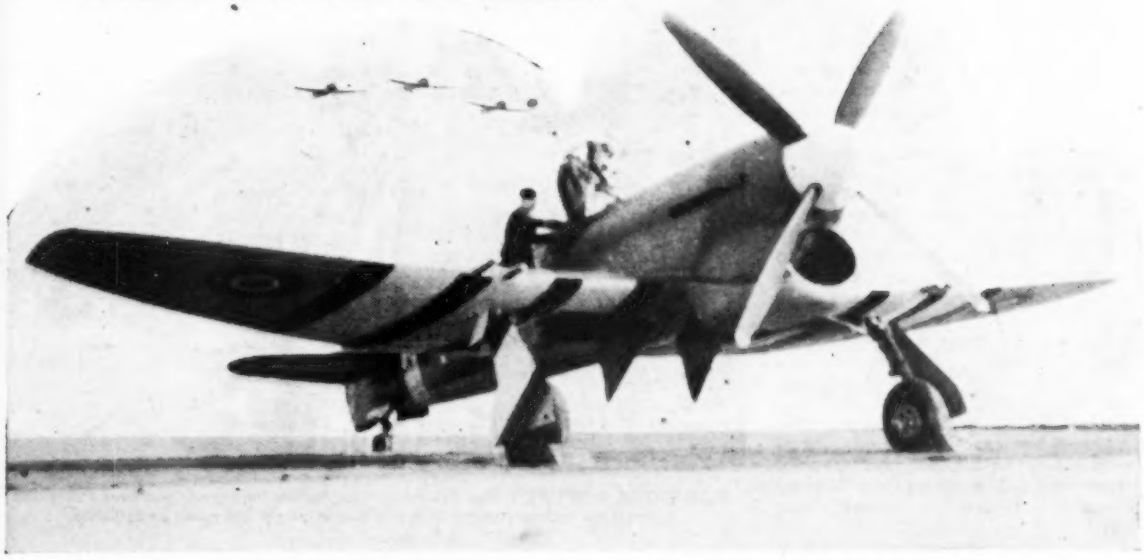
ROYAL VISIT TO HOLLAND: H.M. The King and Field Marshal Sir Bernard Montgomery leaving headquarters. On the left is Air Marshal Sir Arthur Coningham, who commands 2nd T.A.F. and, on the right, Air Vice-Marshal Harry Broadhurst, who received the C.B. and a Bar to his D.F.C. from the King at an open-air investiture in the field.

WAR in the AIR



STABLE COMPANIONS : Typhoons fly over a Hawker Tempest standing on a Belgian airfield.

Sea-air Operations in the Pacific : Death of Rommel—and Others : Effect of Air Power in the West : Carriers in the Aegean

QUITE possibly the Japanese official broadcasters are telling the truth when they say that their own people still believe the official broadcasts, and that the announced news of a tremendous victory over one of the American fleets caused rejoicings throughout Nippon. But, if that is so, it is the only piece of truth which was told in the said announcement. The main facts were that the Americans approached the Philippines, at the end of a prolonged period of bombing targets in Formosa. As usual the U.S. fleet contained a high proportion of carriers, and their planes were soon over the great island of Luzon, attacking various targets.

It seems that part at least of the Japanese fleet did actually put to sea and approached the Americans, but as soon as the enemy Admiral saw that the American fleet was undiminished in strength, he turned tail and went home again. This was reported as a great sea victory in which some 50 American warships were said to have been sunk. No wonder the credulous populace at once began to celebrate and, to use a word which was once current in Britain, to "maffick." But air attacks on the Philippines and Formosa went on.

Some instructive figures have been published by the Americans. Since Pearl Harbour their submarines alone have sunk 956 Japanese ships. Since June 6th last (our D-day) Admiral Halsey's 3rd Fleet and Admiral Spruance's 5th Fleet have been attacking Japanese bases in the Western Pacific, and in the 4½ months have sunk or damaged 905 vessels, shot down 1,827 aircraft, and destroyed 1,253 aircraft on the ground. Evidently the carriers and their aircraft have been very profitably busy. Another report says that between October 9th and 15th 915 Japanese aircraft were destroyed in the Philippines-Formosa area.

When one considers how the Japanese extended their lines of communication over the Western Pacific, evidently under the impression that Pearl Harbour had given them permanent control of the seas, one may form some idea of how deadly to their prospects is the loss of shipping shown above—for successful warfare always depends on communications and supply, and war in the Pacific means sea communications.

The loss of aircraft must also outstrip the capacity of Japanese factories to produce replacements. We British have found in Burma that the Japanese were not incapable of replacing lost fighters fairly promptly, but had not an equal power of replacing lost bombers. The U.S. policy of building

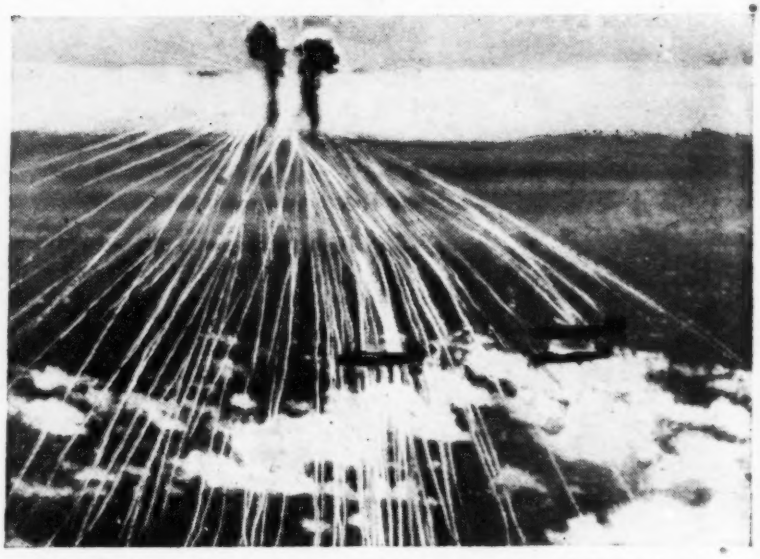
FIRST BLOOD : Technical Officers of the R.A.F. inspecting the remains of the first Me 262 jet-propelled aircraft to be shot down behind our lines

WAR IN THE AIR

lots of aircraft carriers has already paid handsome dividends, and is evidently going to have an important effect on the progress of the eastern war after Hitler and Co. have surrendered.

Some other interesting statistics have been published by both the enemy Powers. In the past seven weeks the deaths of no fewer than 22 Japanese Admirals have been announced. The last three were said to have died "in battle" or "of illness at the front." There has not been enough sea fighting to account for even a reasonable proportion of these deaths in battle. There may be epidemics spreading through the Japanese Navy—but there is also the possibility of *hara kiri*. No Japanese Admiral has exactly covered himself with honour in the last year; and for those who fail to do so, the "happy despatch" remains the obvious way out.

At the same time we learn that Germany has lost 138 Generals in the war, the latest being the famous Rommel. He died in hospital after a wound. The Germans say it was caused by a motor accident which was the result of an air raid. This seems a confused account. Just about the time that his wound or injury was announced, the R.A.F. had been making a series of deliberate attacks on German headquarters in Normandy, and it is quite probable that a bomb was the direct cause of Rommel's death. His name was once mentioned with something like awe by British soldiers; but Montgomery soon took his measure, and always had the better of him whenever they met in battle.

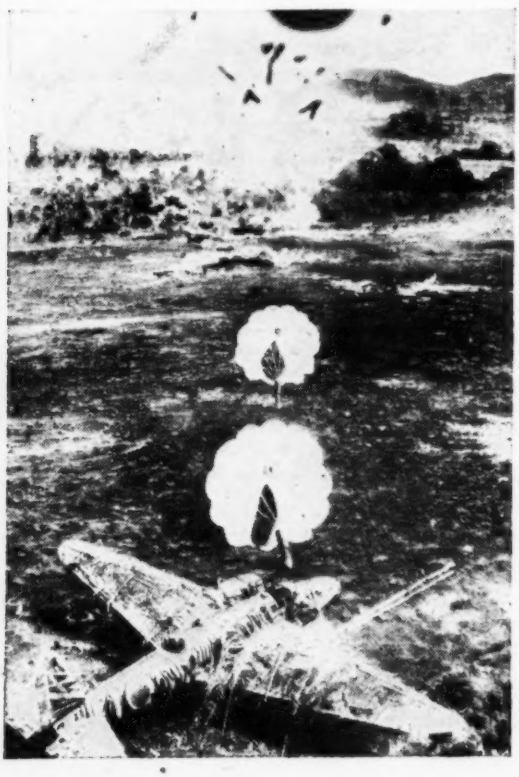


FIREWORK DISPLAY: Two Japanese phosphorous bombs explode over American Liberators raiding Iwo Jima in the Kazans, only 650 miles from Tokio.

Air Blows in the West

THE German resistance on the line of the River Maas is said to have been growing weaker of late, and this has been attributed to the enemy's shortage of battle supplies. One report said that the Germans themselves had been blowing up bridges over the river, knowing that the Allies have ceased to want to destroy such means of communications, which they hope to use themselves before long.

A more probable explanation of the troubles of the German troops is the activities of the Allied Tactical and Strategic Air Forces. These have been regularly attacking bases in the Rhineland as well as communications systems just behind the enemy's front. One day last week the Typhoons, Spitfires and Tempests of 2nd Tactical Air Force struck at no less than 12 of these transport routes behind the battle zone, and, among other things, the railway line from Utrecht to Münster was cut in 12 places. One can picture the discomfiture of the German soldiers when supplies which they urgently needed in the stubborn struggle did not arrive.



GENTLY DOES IT: Parafrag (parachute fragmentation) bombs landing near a Sally MkIII on Old Namlea airfield on Buru Island.

Despite deplorable weather the Canadians were busy all last week in trying to clear the water approaches to Antwerp. The main obstruction was the little place named Breskens, on the mainland just opposite Flushing. This was stoutly held by German parachute troops and infantry; but theirs must have been a depressing fight, as they knew that no relief could come to them. Their only consolation was that while the Allies could not make use of the port of Antwerp they were handicapped, and probably delayed in their plans for breaking through into Germany. Actually the Americans and British did start fighting on German soil before the Russians managed to cross the frontier into East Prussia. Now the Reich has experienced foreign invasion on both its West and East Fronts. At first the invasion was on a small scale; but it is bound to increase to great proportions before long.

The Strategic Air Forces of Air Chief Marshal Harris and General Spaatz have been striking with ever-increasing strength at the Fatherland. Cologne, Kassel, Mainz and Ludwigshafen-Mannheim were among the targets recently attacked in strength. The Americans lost 10 heavy bombers and 23 fighters in the attacks on the first two, and 11 bombers and 11 fighters in the raids on the last two. The American forces in the attacks on the last two amounted to over 1,000 Fortresses and

WAR IN THE AIR

Liberators, escorted by more than 700 fighters. So the losses were small in comparison with the effort, and this was doubtless due to the absence of all opposition in the air. One would have thought that the *Luftwaffe* would have sent up fighters, but it did not. Perhaps none were at hand; perhaps the sight of an escort of 700 Thunderbolts and Mustangs persuaded the defence chiefs that discretion was the better part of valour.

Clearing Up the Aegean

WHILE Athens and Thebes are rejoicing in their liberation, the Royal Navy and the Balkan Air Force have been busy over the Greek mainland and islands. Naval aircraft have been at work to the north of Athens, bombing and shooting up cars and other vehicles belonging to the fleeing Germans. Escort carriers have destroyed enemy craft off the island of Leros in the Dodecanese; while H.M.S. *Ajax*, of River Plate fame, captured the island of Santorin to the north of Crete. The enemy garrison surrendered. The Balkan Air Force has attacked shipping in the Gulf of Salonika.

The Philippines Invaded

WHILE in the West the capture of Aachen by the Americans, after days of hard fighting, and of Breskens by the Canadians are pieces of news which should help much to end the German stand on the borders of the Fatherland, the most striking event of the week-end was the American landing on Leyte island in the centre of the Philippines. It was in itself an amazing feat, and it may lead to the most important results.

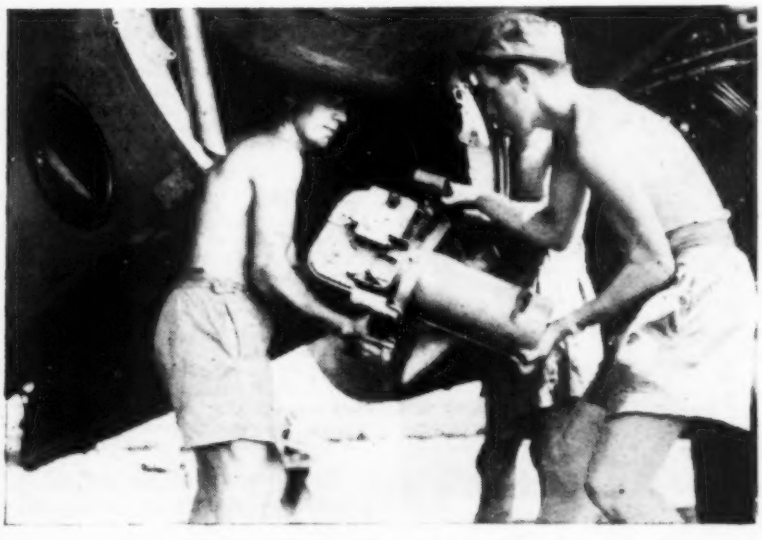
AIRBORNE BAZOOKAS: American soldiers examining a parachute supply container which the *Luftwaffe* intended to drop to the defenders of Aachen. It contained 12 anti-tank missiles similar to the American "Bazooka."

In the first place it took the Japanese completely by surprise. They seem to have expected a landing further to the south, that is to say, nearer to the island bases which the Americans had already seized. Of course, as a Japanese spokesman has said, it was impossible for the present conquerors to guard every point on the coast of the numerous islands which compose the Philippines group. But one would have expected that the aggressive Power which recently ruled the seas and the air above them in the Pacific, would have been aware of the approach of an enormous armada of ships, and would have seen which way that armada was heading. That the Americans should have been able to steam unmolested into the middle of the group of islands, and land without any real difficulty on a predetermined spot shows how the mastery of the seas (including the air) has changed hands since Pearl Harbour.

What a satisfaction it must have been to Gen. MacArthur to return, as he promised, to the Philippines at the head of a powerful force! The order given to him to leave his heroic troops at Corregidor in the early stages of the war must have been a bitter pill to such a gallant man. But the U.S. authorities were wise to insist on such an exceptional soldier remaining free to fight on.

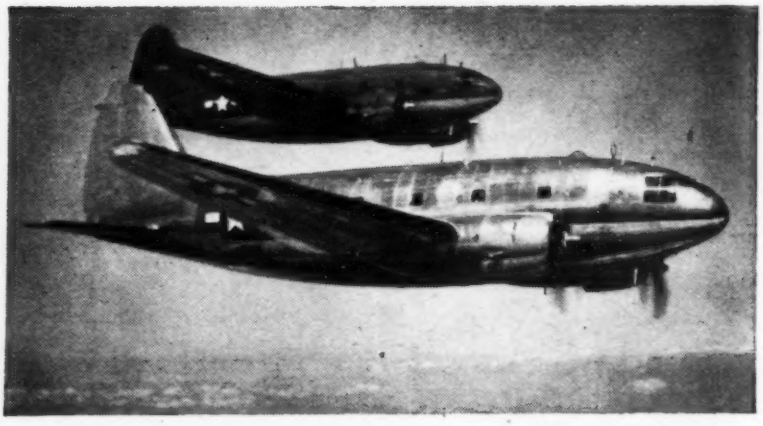
The first objective of the invading American troops was the airfield at Tacloban, and this was speedily captured. From there air power can radiate outwards and lead to further conquests. If all continues to go well, it should soon be possible for the Americans to cut the sea communications between the Philippines and Formosa, and also the sea channel which connects Formosa with the Dutch East Indies. The Japanese conquests always depended on command of the seas, taking air power to be an essential part of sea power. If once the Japanese forces in the various conquered islands are cut off from their base, and are consequently unable to get supplies of warlike stores, their reduction and annihilation can only be a matter of time.

In the meantime the Royal Navy has been steadily building up a fleet in the Indian Ocean strong enough to engage the entire Japanese battle fleet by itself. Part of this fleet, in which carriers played an important part, bombarded the Nicobar Islands for four days recently, and met only the feeblest response.



THE LOW-DOWN FROM HIGH-UP: Fitting a long-focus camera to a reconnaissance Mosquito in Burma.

HERE AND THERE



POLISHED PERFORMANCE : Camouflage paint is no longer applied to U.S.A.A.F. aircraft which look and perform better in their polished nudity. The R.A.F. compromises by polishing the camouflage.

Closer Co-operation

ROME radio, quoted by Reuter, revealed recently that pilots of the Italian Air Force have, for the first time, used Allied aircraft in military operations by fighter formations.

Change in N.Z. Air Command

AIR COMDRE. SIR ROBERT CLARK-HALL has been appointed Air Officer Commanding No. 1 Islands Group of the New Zealand Air Force in place of Air Comdre. M. W. Buckley, who is returning to New Zealand.

"Squirts" Going Strong

IN a written reply to Mr. Hewlett (Con., Manchester Exchange) Sir Stafford Cripps has stated that the production of jet-propelled aircraft in this country is making good progress. It would be contrary to the public interest, he added, to make any more detailed statement.

High Average

THE fastest journey from England to the Gold Coast, British West Africa, was made last week by a Transport Command aircraft carrying urgent documents to Lord Swinton, newly appointed Minister for Civil Aviation.

The 4,795 miles from England to Accra, West Africa, was done in 31 hours 14 minutes overall time by a Mosquito piloted by Flt. Lt. J. Linton, of Cookham Dene, Berkshire. He stopped at Rabat, Morocco, where he refuelled, and again at Bathurst.

Finnish Air Mail Hopes

À GOTEBORG firm has asked the General Post Office whether there are any prospects of a resumption of the air-mail service with Turkey *via* Russia before the end of the war. The firm considers that it might now be possible to arrange this service *via* Finland.

B.T.H. Jet Units

WHEN we published the first picture of the Gloster jet-propelled monoplane in our October 5th issue we stated that the Whittle engine unit was built by Power Jets, Ltd. This is not strictly correct. The jet engine was actually built by the British Thomson-Houston Co., Ltd., at their Rugby factory for Power Jets, Ltd., and supplied by them to the Gloster Aircraft Co., Ltd.

The B.T.H. Company played a considerable part in the development of early Whittle jet units.

Eire Night Flier

THE distinction of wearing the pilot's badge of the Royal Yugoslav Air Force has been conferred on Wing Cdr. James Wallace, D.S.O., D.F.C., of St. Adolphus's Terrace, Limerick City, Eire. He is a squadron commander of a Desert Air Force Baltimore night-flying wing in Northern Italy.

Pan-American Giant

"THE new Pan American air liner which will be used in the company's proposed long-range transocean flights," says a Reuter message from Washington, "will carry 128 passengers by day or 119 by night with 30 accommodated in berths.

"With a gross weight of 184,000 lb. the aircraft can generate 14,000 h.p. for take-offs. It has a cruising speed of 288 m.p.h. using 64 per cent. of its horsepower, when flying at 25,000ft. The cargo capacity is just over 2,009 cu. ft."

This evidently refers to the Lockheed Constitution.

MAIL AND SUPPLIES are carried to forward units on the Western front by the R.A.S.C. Air Freight Service. Dakota, Anson, Oxford, Hurricane, Sentinel and Auster can be seen on their airport, glimpsed from the air, from which 5,000 tons have been delivered within 14 days.

Speeding Front-line Supplies

DURING the first week of operations between New York and Paris, C54 aircraft of the United States Army Air Forces Air Transport Command carried more than 50,000 pounds of cargo, including mail and passengers, it was announced last week by London A.T.C. Headquarters.

Priority war cargo brought into France on the newly established route included vital map-making equipment, medical supplies and engine parts destined for the front line.

Swedish-Finnish Air Traffic

CAPT. FLORMAN, of "Aerotransport," who has been interviewed by *Aftonbladet*, says that Swedish air traffic to Finland has gone on without a hitch since the armistice, but desires have been

HERE AND THERE

expressed for the resumption of the airline between Stockholm, Mariehamn and Abo. It is entirely a question of fuel, Florman says, and at present there is little prospect of resuming Aland traffic.

Dead-heat

THE Austin and Fort Dunlop squadrons of the A.T.C. were the joint winners of the Leek Efficiency Trophy given for the most efficient squadron in the Midland Command.

This trophy was presented in 1941 by Mr. James Leek, C.B.E., and is officially inscribed, "Birmingham and District Group Perpetual Efficiency Trophy."

Back to "Fighter Command"

LAST week-end the Air Ministry announced that the air forces defending great Britain would drop the title of A.D.G.B. and revert to "Fighter Command" and, still under its A.O.C.-in-C., Air Marshal Sir Roderick Hill, would again come under the direct control of the Air Ministry instead of via A.E.A.F.

The name was changed to A.D.G.B. last March, and the return of "Fighter Command" will, we feel, be generally welcomed.

To Speak for South Africa

SOUTH AFRICA'S representatives at the Montreal conference on civil aviation are Dr. Stefanus F. N. Gie, their Minister in Washington, and Mr. John Martin, the South African industrialist. Brigadier J. Holthouse, military attaché at the South African Legation in Washington, and Col. G. S. Liverton are acting in the capacity of advisors.

The same "team" will represent the Union at the international conference that opens in Chicago on November 1st.

Opposite Numbers

IN the meantime a joint Australian-New Zealand conference on civil aviation got under way last week in Wellington, N.Z., with Mr. Peter Frazer, the New Zealand Premier, in the chair, and Mr. Arthur Drakeford, the Australian Air Minister and Minister of Civil Aviation, as his country's principal representative.

It is already well known that Australia and New Zealand favour a much more complete degree of internationalism in post-war civil aviation than does either Great Britain or America, but there is every reason to hope that the policies ultimately evolved at Wellington and Chicago will not be as far apart as their geographical origins.

Let's Hope He's Wrong

LT. GEN. SIR DOUGLAS BROWNRIGG said at Ealing recently that he thought the failure of the first airborne division at Arnheim had made it unlikely that the war would be ended this year or that we should beat the Russians in the race for Berlin.

It was a very gallant endeavour, but experience had shown that airborne attacks were likely to be successful only if not more than 20 to 30 miles ahead of ground forces, whereas the men of Arnheim had been dropped 60 miles ahead.

The General added that he was expressing only his personal opinion and hoped he might be wrong about the duration of the war.

SEA SAMARITAN: A Sikorsky helicopter, specially equipped for air/sea rescue, being demonstrated at Lakehurst Naval Air Station recently.

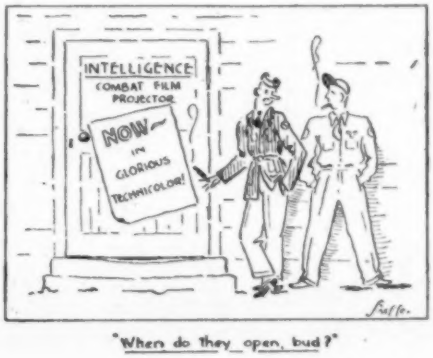
Empire Schools for Flyers

FOLLOWING the success of the Empire Flying School, it has been decided to organise the Central Navigation and Air Armament Schools on similar world-embracing lines, says the Air Ministry News Service.

The main objects of the Navigation School are to ensure the quality of air-navigation instruction and to train a limited number of officers to act as links between practical aviation and scientific research.

The Armament School will adopt a similar policy, which will include specialised work at the Central Gunnery School. The three Empire Schools are in the Flying Training Command of the R.A.F.

It is anticipated that the new policy will do much to cement still further comradeship between the R.A.F. and the Services of Canada, New Zealand, Australia, South Africa, Southern Rhodesia and India.



"When do they open, bud?"

Dagenham Presentation

ANTIQUE silver tankards were recently presented to Sir A. Rowland Smith and Sir Patrick Hennessy by Lord Perry, chairman of the Ford Motor Co., at Dagenham, in recognition of the knighthoods conferred on them. He made the presentation on behalf of the directors and employees.

Lady Smith and Lady Hennessy also received gifts, the former a Georgian silver tea and coffee service and the latter an antique mahogany inlaid writing table and an antique oak court cupboard.

Sir Rowland, a managing director of the company, received his knighthood for his services as controller of the Ford aircraft engine factory on behalf of M.A.P., while Sir Patrick, the company's general manager, was knighted for his services as a member of the Advisory Council of the M.A.P. Both have been with Ford for many years.

We Recognise Their Difficulties

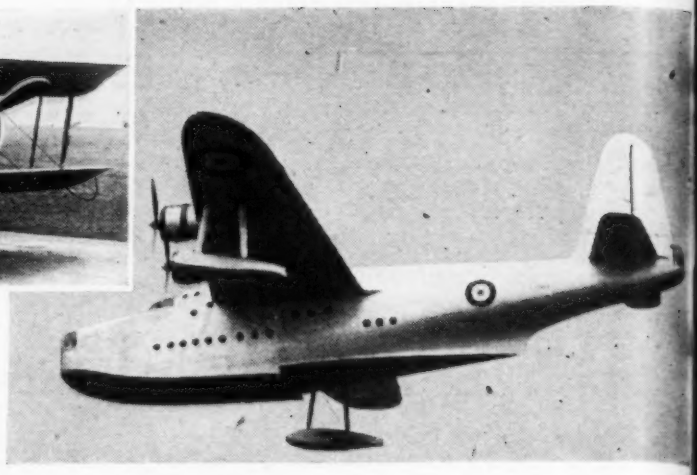
THE trials and tribulations which beset those who produce technical and semi-technical journals these days are fully appreciated in the offices of *Flight*—and we are prepared to believe they are no less on the North American continent than in Britain.

But we must admit we gasped to see, in a recent issue of our Canadian contemporary, *Commercial Aviation*, two glaring "bricks"—and in the same article, too!

The first was a picture of the Short Stirling on view outside St. Paul's beneath which was the inscription. "An unusual sight in Britain shows an American 'heavy' on display in the Town Hall Square."

The second was a picture of a Lockheed Lightning, sans outer wing panels, being squeezed along a narrow country road in Britain, with an inscription referring to the aircraft as a "heavy bomber."

Aircraft recognition seems to be in its infancy in Canada!



(Top left). The squadron came into existence in 1914 with four of these 80 h.p. Bristol Scouts on charge. (Above) The 4,000 h.p. Short Sunderland with which No. 201 Squadron was equipped in 1940.

Thirty Years On

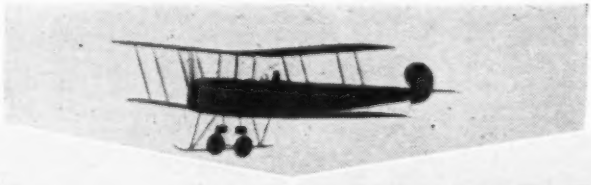
No. 201 Squadron Holds a Birthday Celebration

TO understand this story at all, it is necessary to go back to the very roots of military air force in Britain. When the Royal Flying Corps took over from the Royal Engineers in 1912, it operated both a Military Wing and a Naval Wing The Naval Wing became the Naval School of Aviation, to develop later into the Royal Naval Air Service.

No. 1 Squadron of the R.N.A.S. was formed on October 15th, 1914, at Fort Grange, Gosport, under the command of Sqn. Cdr. (now Air Chief Marshal) A. M. Longmore. It was this unit whose thirtieth birthday was celebrated last week by No. 201 Squadron, who are in direct succession to No. 1 R.N.A.S. Squadron.

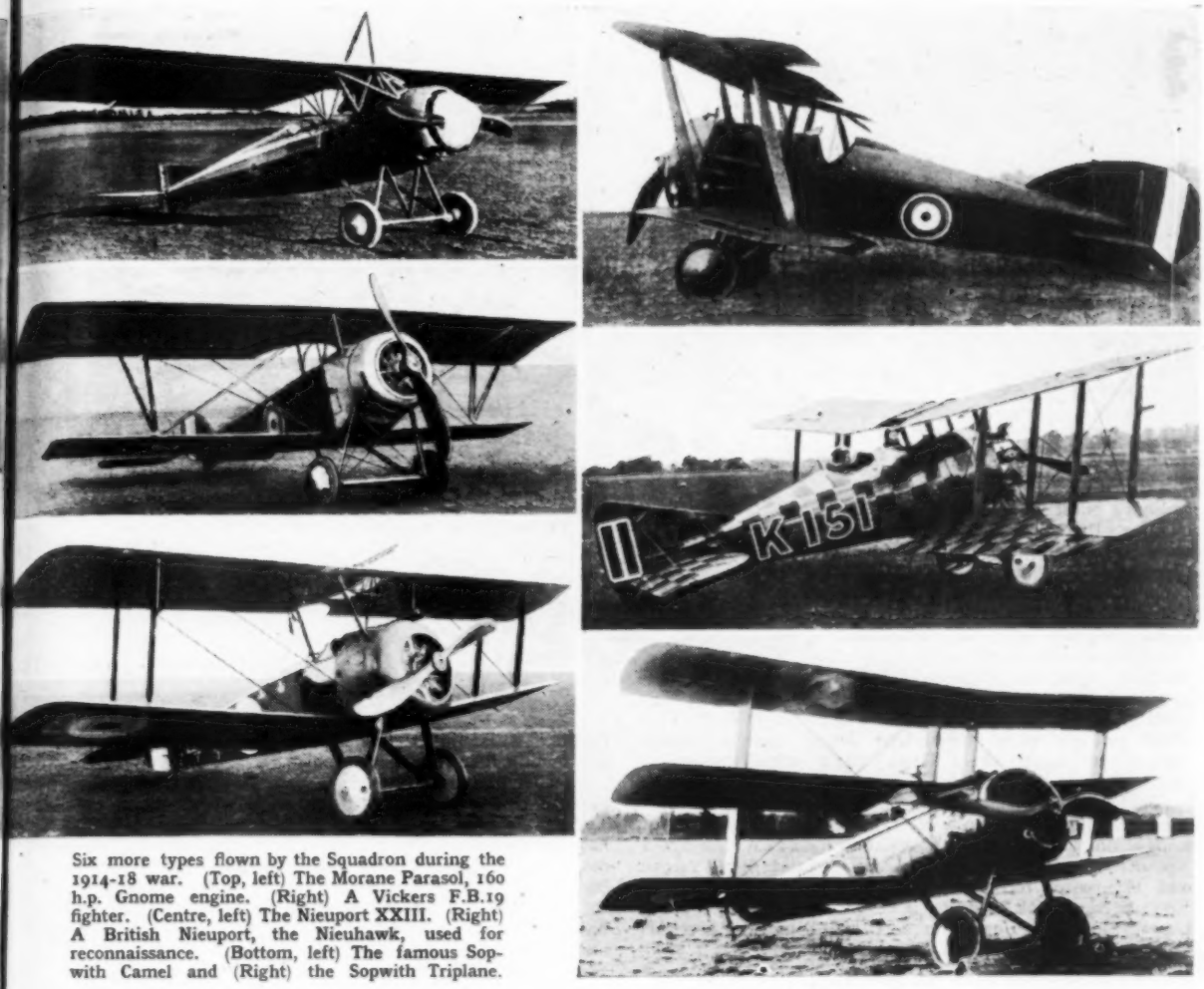
The renumbering occurred on April 1, 1918, when the Royal Flying Corps and the Royal Naval Air Service were amalgamated to form the present Royal Air Force. In order that no confusion should arise by the existence of two squadrons—one R.F.C. and one R.N.A.S.—each bearing the same number, it was decided to prefix all the R.N.A.S. units by 200. Thus No. 1 R.N.A.S. Squadron became No. 201 Squadron, R.A.F., but it retained the precedence due to its original founding.

Having regard to the difficulties inseparable from wartime catering, the Squadron put on a magnificent show for this celebration of 30 years' existence. The mess tables were laid almost to peacetime standard and considerable



(Top) In December, 1914, No. 1 R.N.A.S. Squadron had some Avro 504K aircraft with 80 h.p. Gnome rotary engines. Some 504Ks were still flying in 1930. (Centre-left) The 50 h.p. Henry Farman of the type in which Lt. A. M. Longmore flew Mr. Winston Churchill over Cromarty Firth. (Right) In 1915 the Squadron had Maurice Farmans, both land and seaplane types, in use.

Known to all as "Jenny," the Curtiss J.N.4 was supplied to us by America. It later became the standard training aircraft in the U.S. The Squadron used them in 1915.



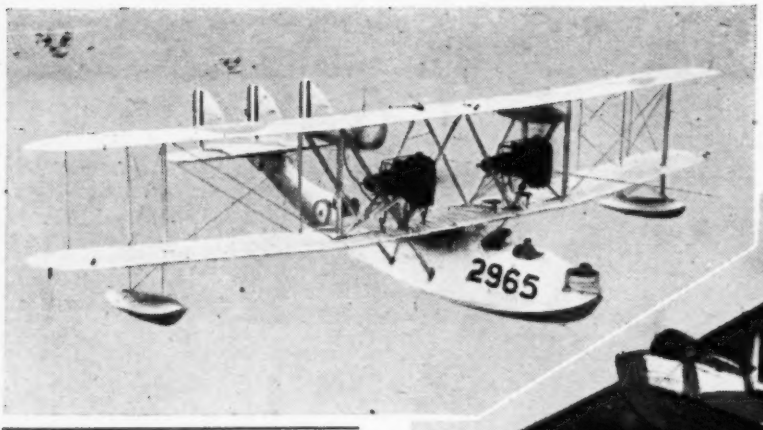
Six more types flown by the Squadron during the 1914-18 war. (Top, left) The Morane Parasol, 160 h.p. Gnome engine. (Right) A Vickers F.B.19 fighter. (Centre, left) The Nieuport XXIII. (Right) A British Nieuport, the Nieuhawk, used for reconnaissance. (Bottom, left) The famous Sopwith Camel and (Right) the Sopwith Triplane.

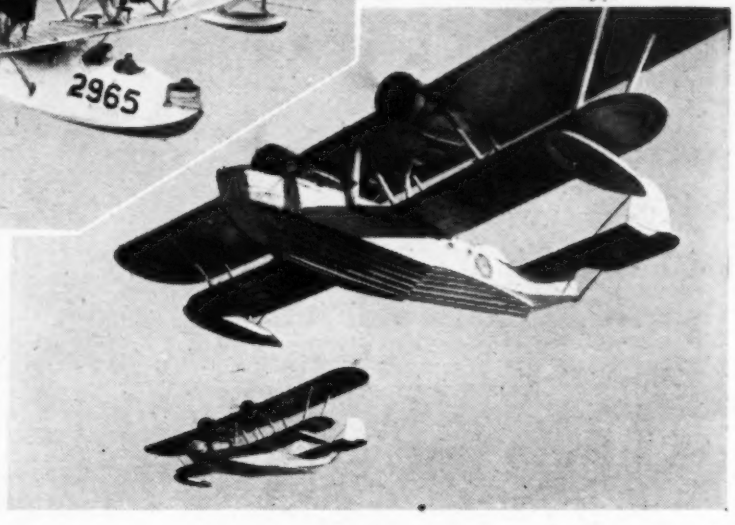
quantities of the etceteras necessary to an R.A.F. party were in evidence. A lot of painstaking work had been put in.

It had been hoped by Wing Cdr. H. R. (Jasper) Coates, the present C.O., that Air Chief Marshal Sir Arthur Longmore and some of the other previous "owners" of the Squadron would be able to attend the function. Unfortunately, owing to a mixture of bad weather and war preoccupation, none of them could turn up, and Air Chief Marshal Sir W. Sholto Douglas, A.O.C.-in-C. Coastal Command, was, for the same reason, also prevented from coming. They all, however, sent their congratulations. Grp. Capt. G. A. Bolland, C.B.E., Station Commander, in a short speech after dinner, congratulated the Squadron on its history and its present success, pointing out that, in this war alone, No. 201 had gained 1 D.S.O., 16 D.F.C.s and 10 D.F.M.s. The Squadron was, he said, building up tradition which would guide units of the future.

There was then a general call of "Up." "Up," "Up" for Wing Cdr. H. R. Coates, who not only commands the Squadron to-day, but is also one of its oldest inhabitants from previous service in the unit. Despite a game leg in plaster from a slight accident in a motor boat, he managed to make the table top and deliver a short homily. In a cryptic remark he pointed out that while No. 201 had scored 10 kite balloons in the last war, they had scored none in this war. It may be that this was just a playful jest at the expense of some commanders and representatives of other flying-boat squadrons who were present—an

An early wooden-hulled Supermarine Southampton of 1925. Maximum speed was just over 100 m.p.h.





(Left) A formation of No. 201 Squadron Southamptons photographed in 1933. They first had these metal-hulled boats in January 1929. (Below) The Saro London flying boats of No. 201 Squadron which replaced the Southamptons in October 1936. These remained in service until March 1940.

THIRTY YEARS ON

ordinary guest would not know. The evening thereafter developed as a good R.A.F. guest night should develop.

On such an occasion it is not inappropriate to recount some of the history of this squadron, which has spent nearly a third of its life at war. No other squadron can have had such a varied life or have flown such a variety of types of aircraft. In their embryo stage they had kites, airships, landplanes and seaplanes. These latter were known in those days as hydro-aeroplanes. It is interesting to read that Lt. Longmore (as he was then) took Mr. Winston Churchill, then First Lord of the Admiralty, for a flight on a Henry Farman at Cromarty Firth. As No. 1 Squadron, R.N.A.S., they did single-seater fighter work and two-seater reconnnaissance flying. When becoming No. 201, they took to flying boats, and at the present day they fly for long hours to make U-boats' lives both miserable and short.

First U-boat Strike

So far as can be ascertained, they were the first people to attack a German submarine. Some of their pilots obtained direct hits with 20-lb. Cooper bombs on U.14 in Zeebrugge Harbour. This occurred on February 12th, 1915, and it was in this action that No. 1 had its first casualty. Flt. Lt. E. G. Rigall, in an Avro 504 (No. 875 which had been used to attack the Zeppelin sheds at Friedrichshafen in November, 1914), was shot down.

Well-known names appear frequently in the Squadron's history. For instance, in April, 1915, Sqn. Cdr. Courtney (now Air Marshal and a member of the Air Council for Supply and Organisation), with 2/Lt. J. H. D'Albiac (now Air Vice-Marshal and, until recently, Deputy Commander of the Mediterranean Allied Tactical Air Force) as observer in a Maurice Farman, is noted as having successfully spotted for the guns of H.M.S. *Bustard* by means of a signal lamp.

Shortly after the end of the last war, the Squadron was disbanded at Lakedown, on December 31st, 1919, and came into being again in January, 1929, in the following manner: In 1922 some F.5 boats of No. 230 Squadron were transferred from Felixstowe to Calshot and amalgamated with the Naval Co-operation Flight, which was already stationed there. This combined unit kept the designation No. 230 Squadron. The new Squadron was given the task of naval co-operation with the submarine flotilla at Portland and, in addition, went on exercises with the Atlantic Fleet. Toward the end of 1922 the unit was renamed No. 480 Flight and kept this designation until January, 1929, when all the flying boat units became squadrons instead of flights. This unit then became No. 201 Squadron and has remained so named ever since.

At this period they were flying Napier Lion-engined Supermarine Southampton flying boats with wooden hulls. These were very advanced aircraft in their day, but they had one drawback. The wooden hulls, despite copious and careful varnishing, soaked up anything from 600 lb. to 800 lb. of water. This was a serious business when the total disposable load amounted to only 5,390 lb. To combat this trouble the Southampton was produced with a metal hull which came out 300 lb. lighter in construction. Water seepage was finished, but metal corrosion—there was no alclad in those days—became a major difficulty.

Supplies of aircraft were very short in the early 1930s—only £16,000,000 was being spent on the whole of the Royal Air Force. At one time there was an Air Ministry order issued to the effect that all flying boats which had flown over 300 hours in the previous two years were to be considered unserviceable. This left No. 201 with only one Southampton available, and this flying boat had to be handed over to the Seaplane Training Flight. For a short while the Squadron had none.

Submarine Rescue

The exact reverse of their everyday operational duties occurred twice in the peace between the wars. In June, 1932, and again in June, 1939, the Squadron went out to help submarines in distress. In the first event it was to assist in the search for M.2 which had failed to surface. M.2 was originally designed as a kind of submarine monitor. It mounted a 12-inch gun. After the 1914-18 war this gun was removed and a hangar for a small seaplane—a Parnall Peto—was built in its place. The second occasion on which the Squadron lent a helping hand to the submarine service was when they flew special rescue gear up to the scene of the disaster to H.M.S. *Thetis*.

On May 9th, 1933, the Squadron flew some of their metal Southamptons up to Loch Foyle to visit the 24 Savoia Marchetti twin-hull flying boats which Marshal Balbo was taking as a formation across the Atlantic. Count Grandi, the Italian ambassador to Gt. Britain, travelled in one of the Southamptons to greet his countrymen. The early part of 1936 saw the Squadron flying the first boat of the type

THIRTY YEARS ON

they were to take on service when the war broke out. This was the prototype Saro London, and production models began to arrive in October of the same year.

A quite remarkable flight, both for duration and circumstance, was a trip by two Londons to Gibraltar on June 2nd, 1937. One was flown by the present C.O. of the Squadron, who was then a flight lieutenant. The journey was made non-stop in 11½ hr., and its purpose was to take nursing sisters to attend wounded men on the German battleship *Deutschland*, which had been damaged by air bombing after interfering in the Spanish Civil War.

As the inter-war peace became more and more uneasy, flying exercises became more arduous and more real. During the Munich crisis the Squadron went to its war station. When war actually broke out, regular patrols of the North Sea were already being flown. In 1940 the Squadron was re-equipped.

Quite obviously the wartime history of 201 must wait for peace before it can be told. It is, however, no help to the enemy to say that since the outbreak of hostilities to date, but mostly since early 1943, they have made numerous attacks on submarines and have had several successes.

J. Y.

College of Aeronautics

Government Accepts Recommendation by Sir Roy Fedden's Committee : Permanent Site Near Main University : Open to Foreign Students

BRITAIN is to have a College of Aeronautics, open to foreign as well as British and Empire students, to provide advanced technical education in aeronautical science and engineering in all branches, and its permanent site will be near one of the country's main universities. But at first it will occupy adapted premises.

This was disclosed in the House of Commons last week by Sir Stafford Cripps, Minister of Aircraft Production, in reply to a question on the subject by Mr. Astor, who enquired of him whether any progress had been made as to arrangements for higher technical education in aeronautics in this country.

"Yes, sir," said Sir Stafford. "The Aeronautical Research Committee were asked by me to prepare a report on this matter, and as a result of their report I appointed an inter-Departmental Committee, under the chairmanship of Sir Roy Fedden, to work out a detailed plan based upon the report of the Aeronautical Research Committee. Sir Roy Fedden's Committee has recently reported, and has recommended the setting up of a College of Aeronautics to give advanced instruction in aeronautical science and engineering in all branches. It is further recommended that the college should be administered under the Minister of Education by a governing body representing the various interested sections of the community. Until such a college can be built it is suggested that a start should be made as soon as possible in temporary accommodation.

"The Government has accepted in principle the recommendations of the Committee, and convenient premises for temporary adaptation are being made available by the Air Ministry, though not at the location indicated in the report. The suggested permanent site is also under review. As the matter is of wide interest, it is proposed to publish the report of the Fedden Committee as soon as possible."

Mr. Astor: "While welcoming this development, may I ask does the right hon. and learned Gentleman realise how important it is that this college should be placed near one of the great universities and not somewhere out in the country, away from all academic atmosphere?"

Sir S. Cripps: "It is hoped that the college will be situated close to at least two of the main universities."

Sir Oliver Simmonds: "Could the Minister say whether the college will be open to Empire students only or to foreign students as well?"

Sir S. Cripps: "It is recommended that it should be open to foreign students as well."

Mr. Pickthorn: "Can the Minister say whether academic opinion has been sounded about the site in question?"

Sir S. Cripps: "Yes, Sir. There were representatives of the universities on the Committee."

Mr. Bowles: "Are the main universities the provincial universities?"

Sir S. Cripps: "There are many main universities in this country."

LONDON–LIVERPOOL AIR SERVICE

THE first civilian internal air service from London since the outbreak of war will be opened shortly by Railway Air Services, Ltd. It will be to and from Liverpool, and the outward service will connect at Liverpool with an additional air service to Belfast.

"The service will for the present be operated by four-engined De Havilland Aircraft, accommodating ten passengers," says the Press Association. These are no doubt D.H.86 type airliners.

Accommodation for the general public is expected to be limited at first owing to the extent to which accommodation is required by the Air Ministry for priority passengers, but the company hopes that as aircraft and personnel become available, authority will be given for additional routes to be opened up.

—AND LONDON–MADRID

YET another sign of the times in aviation was the opening, fixed for Monday last, of the first direct air service between London and Madrid.

This is not just the re-opening of a service that had been suspended because of the war, but the first direct air service that has ever operated between London and Spain, and it is being flown by Dakota aircraft which have accommodation for 15 to 20 passengers. The journey takes between six and seven honrs and, when in full operation, will be flown three times a week.

The only other route to Spain at present is from a West Country airport to Lisbon via Madrid, and both this and the new direct Madrid service have, of course, been made possible by the liberation of France.

B.O.A.C., which is operating the new service, intends in a few weeks time to cease using the present terminal in this country as a base, and is to transfer its landplane services to a new airport in the south of England.

CIVILIANS CAN FLY TO FRANCE

THE airway to Paris is open again to civilians without military permit—but they must have urgent business.

The Home Office states that now that a considerable part of France, including Paris, has been declared an "interior zone," civilians wishing to travel to that part of France no longer require military permits, but only exit permits and French visas.

No sea transport for civilians is at present available, however, and the very limited amount of air transport available for civilians, as well as other considerations, must for some time severely restrict the volume of civilian travel.

For the time being, therefore, applications for exit permits by persons wishing to travel to France can be considered only in cases in which the journey is certified by the competent Government Department as being on urgent business of national importance.

Prospective travellers should not apply to the Passport and Permit Office for exit permits until so advised by the Government Department concerned.

Railway Air Services

Proposed Scheme Put Forward by the Combined Railway Companies

AS we reported in last week's issue, the railways announced in the House of Lords' debate on Civil Aviation that their plans for an air network for Great Britain and Europe were completed and have been sent to the Government.

The official railway proposal reads as follows:—

(a) To operate over all the main and subsidiary routes without subsidy, on the assumption that, by agreement between Governments, no subsidies will be granted to anyone in the European field.
(b) To form a new company to operate the network.
(c) To offer partnership with other air operators, and with short sea shipping interests who operated regular surface routes before the war similar to their own cross-Channel services. Six shipping companies have already accepted their offer in principle.
(d) To give the public complete interavailability of tickets over their land, sea and air network.
(e) To buy British equipment as soon as it is available.

The railways state that they regard air transport as a primary service and not as an auxiliary, and this is made clear in the detailed plan which is now in the hands of the Government. This entails, among other things, a mileage of 20,000,000 annually at the outset, which will be progressively increased. This will cover regular routes and services to all parts of Europe and internally within the British Isles. A feature of the services will be their increasing frequency as economic conditions are restored and suitable aircraft and personnel become available. The railways' air plan embraces provisional services to over one hundred Continental places and nineteen Continental routes extending to Paris, Brussels, Marseilles, Rome and Lisbon, and others as far away as Berlin, Moscow, Istanbul, Helsinki, Athens and Iceland, and some thirty-four internal routes within the British Isles, including Glasgow and Dublin. (See map.)

Aircraft and Time-table

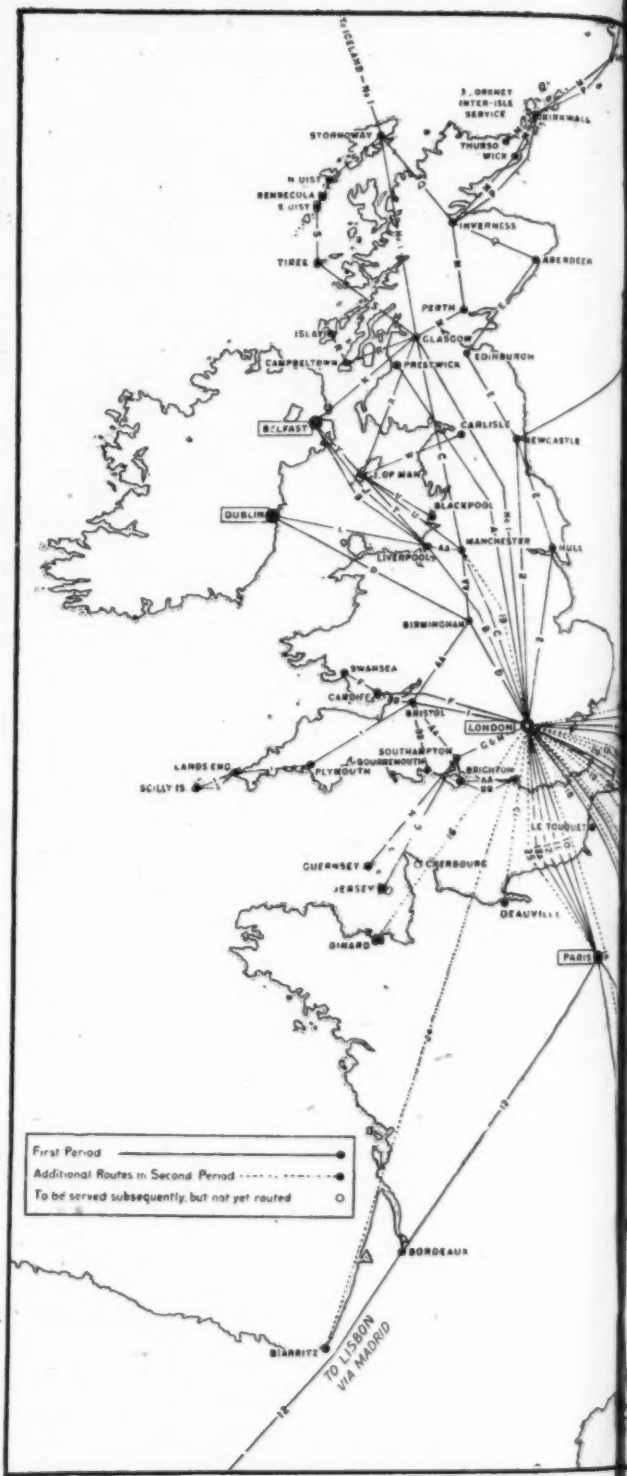
The aircraft to be used in the initial stages will be 25-seaters, combining comfort, convenience of operation, and allowing frequency of services and much saving of time at Customs barriers, etc. Typical flying times between airports from London will be: to Amsterdam, 1 hr. 12 min.; Athens, 9 hr. 5 min.; Basle, 2 hr. 30 min.; Belfast, 1 hr. 47 min.; Berlin, 3 hr.; Brussels, 1 hr.; Dublin, 1 hr. 37 min.; Glasgow, 1 hr. 55 min.; Istanbul, 8 hr. 45 min.; Jersey, 1 hr.; Lisbon, 6 hr. 20 min.; Moscow, 8 hr. 47 min.; Ostend, 43 min.; Paris, 1 hr. 2 min.; Prestwick, 1 hr. 49 min.; and to Rome, 4 hr. 44 min. In later stages the railways look forward to still higher speeds as suitable aircraft become available.

The railways are determined to use British aircraft as soon as these are made available by the British aircraft industry, but to prevent any delay in bringing the comprehensive plan into operation it will be necessary in the interim period to use the wartime version of the D.C.3 commercial air liner or similar aircraft.

Operating, commercial and technical staffs of the highest professional standing and experience in air transport will be employed to carry out the plan. Provision is also to be made for a repair organisation for the overhaul and major repair of aircraft, engines and accessories.

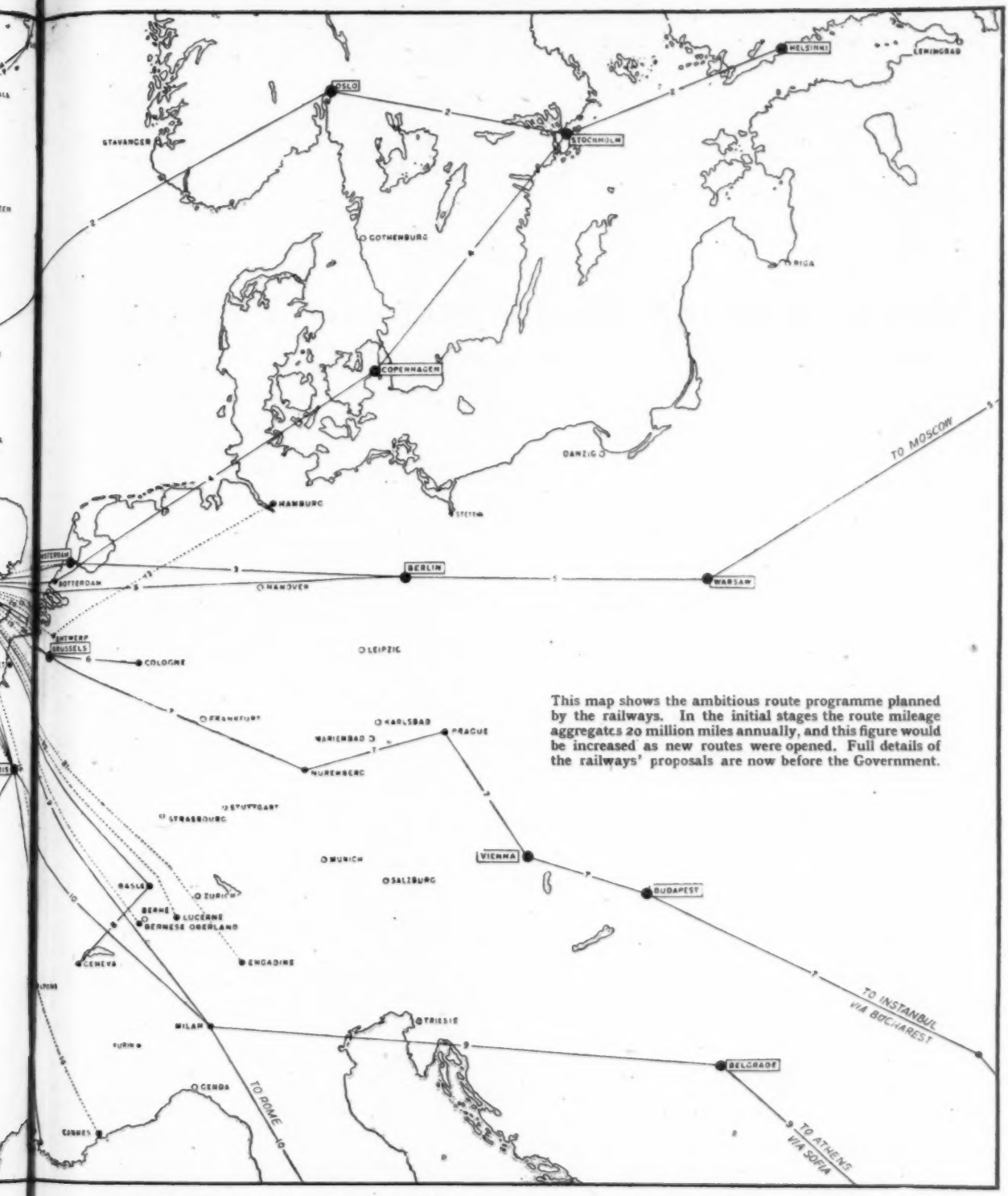
The railways' plan is based on:—

Their firm belief in the future of air travel as a primary means of transport.



Their readiness to undertake a steady development programme of air services, and to operate those without subsidy.

Their experience as air operators, and as the largest operators of Continental cross-Channel traffic, with trained staffs stationed in all parts of Europe both in their own organisations and in Thos. Cook and Son, which they own.



This map shows the ambitious route programme planned by the railways. In the initial stages the route mileage aggregates 20 million miles annually, and this figure would be increased as new routes were opened. Full details of the railways' proposals are now before the Government.

Their intention to do everything in their power to develop air transport in a co-ordinated system of air and surface transport, and their exclusive ability to give complete interavailability by all forms of transport.

This proposed air network of the railways, it is claimed, follows logically from the fact that the railway companies have long ceased to be carriers by rail alone, and have become transportation companies offering co-ordinated transport by rail, sea, road and air. They have ten years' experience in operating air services under the powers granted to them by Parliament, and railway steamship services carried annually 5,000,000 passengers, 2,500,000 tons of cargo and 2,500,000 mail receptacles prior to the war.

During the war the aircraft of Railway Air Services and associated companies (which were operating 80 per cent.

RAILWAY AIR SERVICE

of the total route mileage of all internal air services) have flown six million miles without loss of life, except on one occasion through enemy action, carried a quarter of a million passengers, six million pounds of cargo and mails with a regularity over sea crossings of over 95 per cent.

The railways' experience has shown that internal air services cannot be conducted most efficiently and economically as a separate entity, but should become part of a wider sphere of operations to obtain the maximum number of flying hours per annum from each unit.

Railway air routes will be developed irrespective of the effects such development might have on their surface interests. Their experience has shown that travel promotes travel.

The railways (the Great Western Railway Company, London, Midland and Scottish Railway Company, London and North-Eastern Railway Company, and Southern Railway Company) have offered a constructive contribution towards the successful planning of the post-war world, and their aim is the utmost service at reasonable charges, with, above all, safety, regularity and enterprise. This great plan will give employment to hundreds of British personnel, many of whom will come from the Services, and, when in full operation, calls for upwards of one hundred aircraft.

Air Power in the Battle of France

Farewell Summary by Air Chief Marshal Sir T. Leigh-Mallory

ON the day on which his appointment as Commander-in-Chief of the Air Forces in the South East Asia Command was announced, Sir Trafford Leigh-Mallory summed up the part played by the British and American Air Forces in the liberation of France.

"Air superiority," he said, "was a vital pre-requisite for the invasion of Europe," and he added: "I think it must be evident to all that without the Air Forces our Armies would never be where they are now. We could never have achieved what we have done if the enemy had been able to interfere with our concentrations and movements. Our ground forces could never have decisively defeated the German Army in Normandy had the Germans had free use of their communication routes for reinforcements."

Sir Trafford ran through the history of the main developments since D-day. The Air Forces had been waiting for the moment when the Germans should try to pull out from the trap which was closing round them in Normandy, determined, if possible, to turn that retreat into a rout. But the enemy never tried to extricate himself, but stood his ground. "Possibly," said Sir Trafford, "the Germans were afraid to pull out, knowing what fate was awaiting them on the highways from our fighters and fighter-bombers."

In the second week of August the Germans launched an important counter-attack by armour at Mortain. It was defeated, and the defeat was very largely the work of the Air Forces. On Aug. 7th alone Typhoons accounted for over 130 tanks, of which 83 were totally destroyed.

Great Days

August 18th was a great day for the Air Forces. The fighter-bombers of the 2nd T.A.F. operated in force over the encircled enemy troops; while the U.S. 9th Air Force operated farther east towards the Seine. On this day the 2nd T.A.F. destroyed 1,159 vehicles and damaged 1,700 more; 124 tanks were destroyed and about another 100 damaged. The 9th Air Force claimed 400 motor vehicles.

On Aug. 25th, when remnants of the German 7th Army were fleeing towards the crossings of the Seine at Rouen, the *Luftwaffe* came up in force. Fighters of the 9th Air Force shot 77 out of the sky and destroyed a further 49 on the ground. On the evening of Aug. 28th light bombers of the 2nd T.A.F. claimed a record destruction of transport, when, in one attack alone, out of 1,400 vehicles at least 800 were destroyed or damaged. Later, no fewer than 7,000 dead Germans were found among their twisted vehicles.

By that time both Armies were moving so fast that it was difficult to find targets for our heavy bombers on the battle front. They were therefore directed against railway centres in N.E. France so as to dislocate German efforts to build up a new defence line on the Somme and the Marne. At Trappes, for example, no fewer than 90 engines and 900 railway waggons were destroyed.

By Aug. 20th it was no longer policy to destroy bridges and junctions, as we should need all such things in our advance. So the heavies were diverted to targets in Germany, though some of them still had to keep up attacks on the coastal towns. Between Aug. 24th and Sept. 6th over 6,000 tons of explosives were rained on Brest. Bomber Command also attacked Le Havre and Boulogne. The former was battered by more than 9,500 tons, and as a result our casualties in taking the port were only 400 men.

Supply and Evacuation

Talking of the bombing of bridges, Sir Trafford confirmed what other authorities have admitted, namely that bridges are very difficult targets to bomb, but added that the U.S. 9th Air Force became his champion "bridge-busters." Their aircrews were extremely accurate in avoiding general destruction, and the French people afterwards expressed their appreciation of their accuracy and consideration.

As the lines of communication lengthened, the supply of battle necessities became tremendously important. Between Aug. 9th and Sept. 3rd our aircraft flew up more than 13,000 tons of supplies to the forward positions. The speed of the advancing Allied Armies could not have been maintained in any other way. On the return journeys the aircraft took back casualties to base hospitals.

Turning to those who had helped the Allied Expeditionary Air Force, Sir Trafford complimented the long-range fighters of the U.S. 8th Air Force, whose rôle normally is to provide escort for daylight bombers. They succeeded, he said, beyond all expectations in the important rôle of low-flying destroyers, flying far into enemy territory and well beyond the range of the fighters and fighter-bombers of the two Tactical Air Forces.

The two Tactical Air Forces (the 2nd T.A.F. and the U.S. 9th) made it impossible for the enemy to control the battle, and reduced his channels of reinforcement in such a way as to make it possible for our ground forces to win decisive victories. They were not always superior in numbers. Repeatedly they won the day against superior forces by better tactics and leadership.

Our night-fighters had destroyed 290 enemy aircraft since D-day.

An outstanding feature of the air war was the absence of air reconnaissance by the enemy, while our own Generals received reports of the enemy's intentions in good time.

Sir Trafford gave very high praise to the Airfield Construction Units, which in the British Service are provided by the Royal Engineers. They made landing grounds in country which had been thought impossible; and often they had a ground ready in 48 hours. The squadrons of our Allies and of the Dominions were also praised, the Royal Canadian Air Force receiving a special mention.

Sir Trafford said that once we landed in France the *Luftwaffe* could not pursue a policy of conserving its aircraft, but it was already on the down grade, and was certainly short of petrol.

Behind the Lines

Jap A.A.

THE organisation of Japanese anti-aircraft artillery is based on the battalion which is normally the tactical unit. A battalion consists of 12 guns. A regiment consists of three battalions or 24 guns with an additional number of 20 mm. A.A. machine guns.

Goering Tightens Black-out

FIELD MARSHAL GOERING, in his capacity as C.-in-C. of the *Luftwaffe*, has ordered the strongest possible measures to be taken against black-out offenders, saying that "the proper observance of all black-out regulations must to-day be in our very bones."

Germany's Loss

THE German air ace Lt. Otto Foennekold, wing commander of a fighter squadron, has been killed in action.

He had been decorated with the Knights Cross of the Iron Cross and had many air victories to his credit.

Flying Bomb from Norway

A FOREIGN aircraft, probably a flying bomb, passed over South Sweden from west to east on October 13th, continuing across the Baltic. The bomb may have come from the closed area of Hardangervidda, and possibly this is the first one released from there, though the direction is curious. The flying bomb approached the Swedish coast rather far south and continued eastwards across the Baltic.

The Victory Weapon

THIS extract from a statement made by a German prisoner was broadcast recently by Moscow radio:

"There was much talk at the front of a new weapon which would work our salvation. 'Well,' I said to my comrades, 'What we want is a stick and a piece of white cloth to tie to it. That's the only secret weapon that can really save us.'

"The next day we surrendered."

New Recce Car

IN view of the Allied air superiority, German ground patrols of the Panzer formations find their work increasingly difficult to perform.

In German military quarters it was therefore considered of special importance—a report says—to equip tank formations with a reconnaissance vehicle combining long range, high speed, and a high degree of manœuvrability with heavy fire power, and, above all, with good optical equipment for observation.

The answer to this problem is said to be the new eight-wheel T.P. armoured reconnaissance vehicle.

The vehicle has a speed of about 55 m.p.h. on a smooth road, can do 27 m.p.h. in difficult country, and is said to be highly manœuvrable. The crew consists of a commandant, a gunner and two drivers.

The T.P. is apertured to provide a field of vision completely around the vehicle.

Service and Industrial News from the Inside of Axis and Enemy-occupied Countries

Luftwaffe Aces

AMONG the most successful night-fighter pilots the following names are given by the German News Agency as following closely behind Lt. Col. Lent, who was recently reported killed "by a tragic fate" (*Flight*, October 19th): Capt. Schnaufer, with 100 victories; Maj. Prinz zu Wittgenstein, now fallen, with 83 successes; Lt. Col. Streif, with 63 successes; Capt. Meurer, now fallen, with 60 successes; and Capt. Schönert, also with 60 night victories.

A Nazi Report

AN illuminating picture of the *Luftwaffe* was given in a syndicated article written by H. Marten, a Nazi war reporter. While trying to show that Germany's air weapon is still a force, the article commits the indiscretion of clearly indicating the sad plight of the *Luftwaffe*.

Among other comments, Marten said: "Even if the increasing pressure from the air had confronted the German fighter defence with heavy tasks in the protection of the Reich, the demands made upon them since the beginning of the invasion reached the limit of what is humanly possible.

"To fly and fight against a flood of aircraft accumulated over a long period, six and seven hours a day in the cockpit at maximum concentration from start to finish, not to count losses, and to attack time and again—this, the hardest imaginable test for our pilots, went on month after month. Many have baled out from the burning aircraft six times and more and continued to fly, *and no fewer remained on duty in spite of grave injuries.*

"There are commanders who simply disappeared from the field hospital to be able at least to direct operations from the ground while their wounds prevented them from flying for weeks to come. The *Luftwaffe* did not crack up as the enemy had dreamed and imagined: gaps were closed; the flow to the front from the home factories and schools continued.

"Pilots who shot down four-engined bombers, defeated enemy fighters in the air, and destroyed enemy vehicles and supplies in low-level attacks, are no longer an exception. Their last guiding principle in service was only one: support of the Army, support by every man at all costs.

"It gives the lie to all those in the enemy camp who like to believe in the decline of the German *Luftwaffe*, and who say that there is no 'come back,' entirely overlooking the fact that a comparison with the weakened boxer in the ring is absurd. It is quite wrong in every respect. The *fighter arm has not gone 'to ground'; its service in the wide air spaces of the front is generally outside direct observation, but it can neither be ignored nor denied.*"

New German Weapon

THE introduction of a new German weapon in the fighting for the East Prussia line is reported from Berlin.

The mainstay of the young soldiers' equipment is the electric machine gun, which has been baptised the "Death Scythe," the German Overseas News Agency said.

Sub-contractors

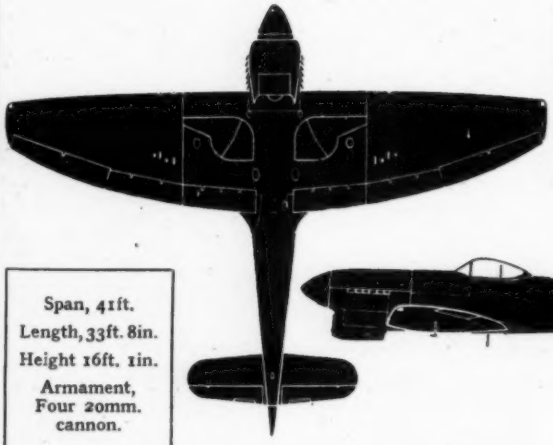
GERMAN official quarters are giving increasing attention to the so-called ancillary supply industries as a means of permanently increasing Germany's armament potential. In recognition of the services rendered by some 57,000 small and medium firms which are supplying special precision products, efforts are being made to broaden the basis of ancillary suppliers, leaving them their valuable skilled labour force in order thus to meet all the requirements of armament production. In view of the intensified Allied air blows the German aircraft and armament industry is forced to rely in an increasing manner upon the widely dispersed sub-contractors, whose contribution is considered to be one of the main prerequisites for a high armament output.

Labour Engineers

A REPORT of the Reich Labour Direction Engineer, Friedrich, of the Ministry for Armament and War Production says that the introduction of labour-engineers has already shown considerable success after one year's existence. Even though the fact that the demands of German enterprises for labour have been reduced to three-fifths since the labour engineers started their work may be partly due to other reasons, this success is in any case due to the work of the 10,000 labour direction engineers who are to-day working in Germany. The report quotes the example of an armament enterprise employing a labour direction engineer which succeeded in reducing its demand for labour by 70 per cent., and another enterprise by 75 per cent., despite increased output, while the demand in a similar enterprise without the labour direction engineers increased by 45 per cent. Thanks to the labour direction engineer in an enterprise of the gunpowder and explosive industry, the staff was reduced from 16,200 to 10,000, despite an increase in production of 50 per cent.

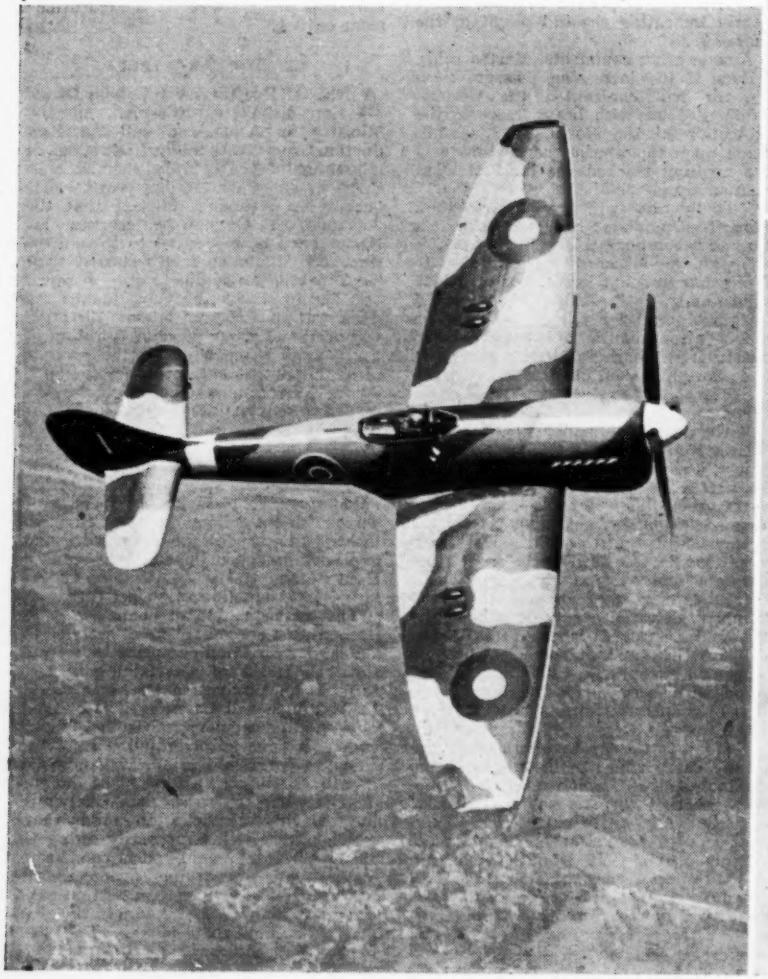
The intensification of home work has opened up a special sphere of activity to the labour direction engineers by setting them the tasks of ascertaining articles suitable for production by home work. In Thuringia and Bavaria—it is pointed out—researches conducted by labour engineers have so far resulted in "discovering" 1.2 million working hours a month for home work. The labour direction engineers can also collaborate in removing obstacles to production, which have arisen temporarily owing to changes in production, and in combating loafing which, according to one report, has decreased by 15 per cent., thus saving 2.5 million working hours in the area of Magdeburg-Anhalt alone. This last figure is indeed very revealing.

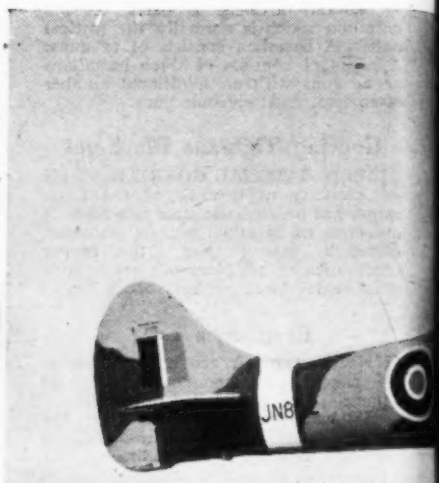
Hawker T

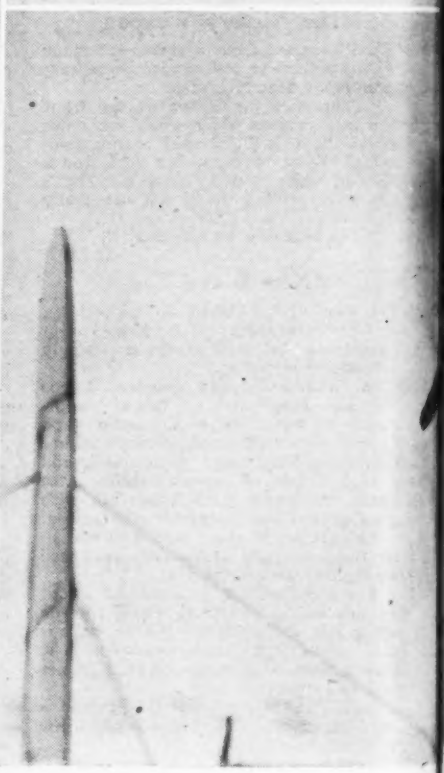


2,200 h.p. Napier Sabre sleeve-valve engine. De Havilland four-blade constant-speed airscrew.

Span, 41ft.
Length, 33ft. 8in.
Height 16ft. 1in.
Armament, Four 20mm. cannon.

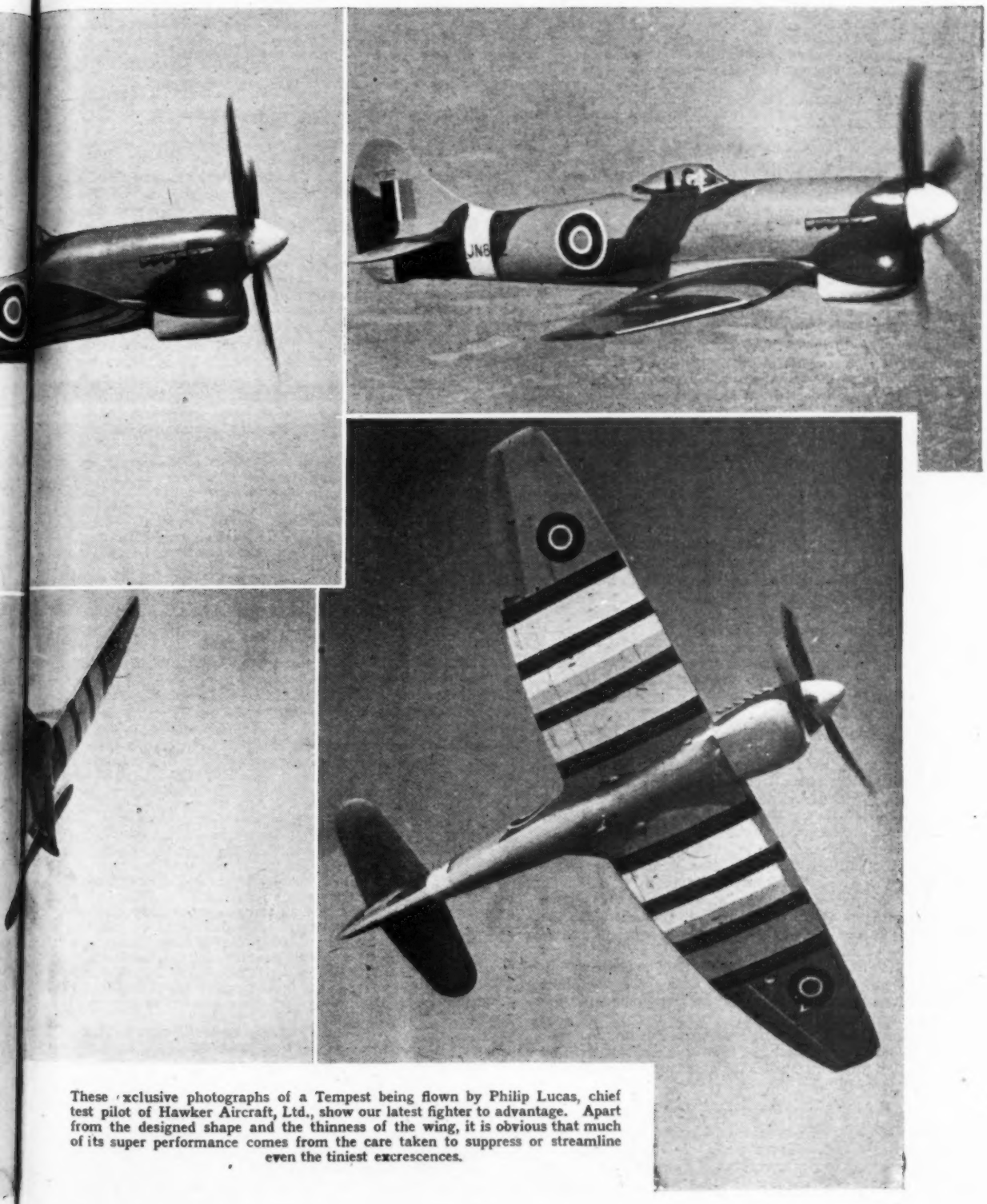






eTempest

Exclusive "Flight" Photographs of the Successor to the Already Famous Hawker Typhoon



These exclusive photographs of a Tempest being flown by Philip Lucas, chief test pilot of Hawker Aircraft, Ltd., show our latest fighter to advantage. Apart from the designed shape and the thinness of the wing, it is obvious that much of its super performance comes from the care taken to suppress or streamline even the tiniest excrescences.

White Paper on Civil Aviation

Government Springs Cut-and-dried Policy on the Commons : New Minister for Civil Aviation Not Consulted

FIRST intimation that the British Government had any definite policy on post-war civil aviation was sprung upon the House of Commons and the country last week when the Air Minister, Sir Archibald Sinclair, replying to a question on the subject in relation to the forthcoming international conference at Chicago, announced that a White Paper had been prepared and would be available " after I sit down."

We give here the text of the White Paper and the sharp criticism of M.P.s provoked by the manner of its introduction. Editorial comment appears on page 433.

FOR some time past, His Majesty's Government in the United Kingdom, in consultation with the Governments of other Commonwealth countries, have been giving close attention to the problems of international civil air transport and to the general principles which should govern the post-war arrangements. The Canadian Government have already published their proposals, other Commonwealth Governments have announced their views, and it now seems appropriate that His Majesty's Government in the United Kingdom should lay before Parliament the plan which they, for their part, favour for the ordering of post-war air transport.

2. Before the war, the international regulation of civil aviation was concerned mainly with its technical aspects, e.g., safety regulations, rules of the air, air worthiness, radio and meteorological procedure, and the licensing of personnel and aircraft. Moreover, there was no single International Convention which commanded universal support. At the outbreak of war, the Convention for the Regulation of Air Navigation (the Paris Convention of 1919) had been ratified by thirty-three States, but, among others, the United States, the U.S.S.R. and China were not parties to it. In addition to providing for a high degree of uniformity in technical matters, the Convention embodied the doctrine of the national sovereignty of the air. Each party to the Convention, however, granted to private aircraft of other member States (*a*) the right of innocent passage through its air space—prohibited areas excepted—and (*b*) freedom of access to its aerodromes. The operation of regular commercial air services was, in practice, subject to the consent of the States through whose territory the services passed.

3. The United States of America, in conjunction with eight Central American Republics and Chile, ratified the Havana Convention, 1928, which, though broadly comparable in scope with the Paris Convention, differed in certain important respects. In particular, its application was limited to the American Continent and it made no provision for international uniformity in technical matters.

4. Neither of these Conventions made provision for international regulation in the economic, as opposed to the technical, field. In the result, the growth of air transport was conditioned by political rather than economic considerations and its development as an orderly system of world communications was impeded. Summed up, the major evils of the pre-war period were, first, that any country on an international air route could hold operators of other countries to ransom even if those operators only wished to fly over or refuel in its territory; secondly, that there was no means of controlling the heavy subsidisation of airlines which all too often were maintained at great cost for reasons mainly of national prestige or as a war potential; and thirdly, that the bargaining for transit and commercial rights introduced extraneous considerations and gave rise to international jealousies and mistrust.

General Principles for Post-War

5. His Majesty's Government desire to see a radical change in this situation after the war. Recent technical advances have increased enormously both the range and carrying-capacity of transport aircraft. The modern multi-engined aircraft has made possible the development of a network of air routes which already span the world. The potentialities of air transport are indeed great; so also will be its influence, for good or ill, on international relations.

6. In other economic spheres, the importance of co-operation between the nations after the war has been recognised. It is no less important that the development of air transport should proceed under enlightened international direction. Accordingly, the view of His Majesty's Government, as stated to Parliament on March 11th, 1943, is that "some form of international collaboration will be essential if the air is to be developed in the interests of mankind as a whole, trade served, international understandings fostered and some measure of international security gained." The main objectives of such collaboration would be:—

(i) to meet the needs of the peoples of the world for plentiful, efficient and cheap air services;
(ii) to maintain broad equilibrium between the world's air transport capacity and the traffic offering;
(iii) to ensure equitable participation by the various countries engaged in international air transport;
(iv) to eliminate wasteful competitive practices and, in particular, to control subsidies;
(v) to standardise practice on technical matters important to the safety of flying;
(vi) in general, to contribute to world security.

New Air Convention

7. His Majesty's Government propose that a new Convention should be drawn up to take the place both of the Paris Convention of 1919 and of the Havana Convention of 1928, and to make provision for the regulation of international air transport. This Convention would:—

(i) reaffirm the principle of national sovereignty of the air and define what should, for this purpose, constitute the territory of a State
(ii) define the degree of freedom of the air to be enjoyed by the ratifying States, conditional on the acceptance in full of the rest of the Convention. Subject to the right of each State to reserve its position in time of war or national emergency, it is proposed that freedom of the air should extend to:—
  (*a*) the right of innocent passage through a State's air space;
  (*b*) the right to land for non-traffic purposes (refuelling, emergency, &c.);
  (*c*) the right to disembark passengers, mails and freight from the country of origin of the aircraft;
  (*d*) the right to embark passengers, mails and freight destined for the country of origin of the aircraft.

  (*Note*:—The right to pick up and set down traffic to and from destinations which are not in the country of origin of the aircraft and the right to engage in the cabotage of another country would be a matter for negotiation.)
(iii) define the international air routes which should be subject to international regulation; these would be reviewed from time to time as necessary;
(iv) provide for the elimination of uneconomic competition by the determination of frequencies (total services of all countries operating on any international route), the

WHITE PAPER ON CIVIL AVIATION

distribution of those frequencies between the countries concerned and the fixing of rates of carriage in relation to standards of speed and accommodation;

(v) provide for the licensing of international air operators who undertook to observe the Convention and to abide by the rulings of the appropriate authority, and for the withdrawal of the licence in the event of a breach of the obligations;

(vi) provide for the denial of facilities to any unlicensed operator;

(vii) provide for the collection and review of information about services, costs, subsidies, rates of carriage, landing fees, &c.;

(viii) provide for arbitration in matters of dispute;

(ix) secure the acceptance by the ratifying States of an obligation to provide, in their respective territories, the ground facilities needed for international services or to allow such facilities to be provided;

(x) prescribe safety regulations, such as rules of the air, airworthiness, licensing of personnel and aircraft, ground signals, meteorological procedure, &c. (The domestic airlines operating within the territories of the member States would not be governed by the Convention, but it is hoped that States would voluntarily apply the agreed standards to their internal services.)

(xi) provide for the standardisation, so far as possible, of radio equipment, meteorological and ground facilities.

The International Machinery

8. For the administration of the Convention, it is proposed that an International Air Authority should be established and under it (i) an Operational Executive with subsidiary Regional Panels; and (ii) sub-Commissions to deal with technical matters.

9. The Authority, which would in due course be placed in proper relationship to a World Security Organisation, would consist of representatives of the ratifying States with voting powers to be determined on an equitable basis.

10. The composition of the Operational Executive and the procedure for selecting its members are matters for further examination. Possibilities are (*a*) that the member should be nominated in the Convention; (*b*) that they should be elected by the Authority; and (*c*) that they should be nominated by the major Powers, with provision for representation of the smaller Powers.

11. Membership of a Regional Panel would be confined to States which have an interest in international air transport in the areas for which each Panel is responsible.

12. It would be the prime task of the Authority to give effect to the provisions of the Convention for the determination and distribution of frequencies and for the fixing of rates of carriage in relation to standards of safety and accommodation. It would, for this purpose, work through the Operational Executive which in turn would delegate its functions as appropriate to the Regional Panels, the decisions of the Panels being subject to review by the Executive, and those of the Executive, if necessary, by the Authority.

13. In addition, the Authority would:—

(i) administer the provisions of the Convention governing such matters as safety standards and ground organisations; and

(ii) prescribe minimum requirements for international aerodromes and ancillary facilities, the provision of which would be the responsibility of the ratifying States; or arrange for the provision of such aerodromes and facilities in cases where a State was unable to do so itself.

14. Such in broad outline are the proposals which His Majesty's Government favour in present circumstances for the ordering of post-war international civil air transport. The proposals are of a provisional nature and may be modified in the light of views expressed by other countries.

Questions and Answers

Asked for a statement of Government policy, Sir Archibald Sinclair said a White Paper would be available "after he sat down."

Mr. Montague: Does the Secretary of State realise that this is the first indication of Government policy upon the subject, and that our representatives who have been mandated from this will be committed at the Chicago Conference, without this House having had the slightest opportunity of discussion?

Sir A. Sinclair: No, Sir. It is not the first indication, as the hon. Member will see. It follows indications which have been given both in this House and another place; but it is the first full statement of policy, for which I have been asked by my hon. Friend who has put the supplementary question and by other hon. Members in this House, and the Government have thought it right to lay this Paper.

Never Discussed

Mr. Montague: Is it not a fact that the Government's policy has not been stated in this House and has never been discussed in this House, and that the country will be committed to that policy willy-nilly, because we cannot go back on it after the Chicago Conference?

Sir A. Sinclair: The White Paper is being published now, but arrangements for Debates are, of course, matters to be arranged through the usual channels.

Mr. Hore-Belisha: Is the right hon. Gentleman seriously suggesting that this country will be committed at the Chicago Conference without any expression of opinion being taken from Parliament?

Sir A. Sinclair: My right hon. Friend knows perfectly well that this is a matter which constantly arises when we enter into international conferences, but certainly there will be discussions, in which all Governments will take part, and His Majesty's Government will be most anxious to have the approval and support of hon. Members.

Mr. Hore-Belisha: Will effective decisions be taken at that Conference? My right hon. Friend realises, no doubt, that the whole future of this country will be bound up with this matter. Surely Parliament will have some opportunity of expressing an opinion before the country is committed?

Sir A. Sinclair: Opportunities for discussion are a matter for arrangement through the usual channels.

Mr. Edgar Granville: Has the new Minister for Civil Aviation been consulted on this White Paper on Government policy?

Sir A. Sinclair: No, Sir, he has not been consulted, but this policy has been worked out for many months past. It has emerged from consultations with the Dominions, and consultations which have taken place in the Government. It is the policy of the Government, and it is a policy which it is quite impossible to change between now and the date of the international conference.

Mr. Pethick-Lawrence: Will the Deputy Prime Minister say whether, after this White Paper is in the hands of Members, if there is a desire for a Debate, he will arrange through the usual channels to have an opportunity for discussion?

Mr. Attlee: Certainly, Sir, but perhaps hon. Members would like to see the Paper first, and then make an approach through the usual channels.

Making no Promises

Mr. Bowles: May I ask for a definite assurance that, even though this Conference at Chicago will be attended by Lord Swinton—if he is back in time from West Africa—no commitments will be entered into at that Conference?

Sir A. Sinclair: No, Sir. That is not an assurance that any Government can ever give. [HON. MEMBERS: "Oh!"] It is quite clear that the Government will not enter into commitments that it has not every reason to suppose that Parliament will support.

Mr. Bowles: Will the Minister give an assurance that this country will not be committed? Do I understand him to say that we cannot be given an assurance and that he says it is most likely that commitments will be entered into?

Sir A. Sinclair: No, I did not say that at all. I say that the Government will not enter into binding commitments that they do not feel confident that the House will support.

Mr. A. Bevan: Is a Debate in this House to precede the discussion at Chicago?

Sir A. Sinclair: I have already made it clear more than once that that is not a matter for me.

Mr. Bevan: Is it not obvious that the Government will not be able to know the mind of the House, unless the House has had an opporunity of indicating what its views are?

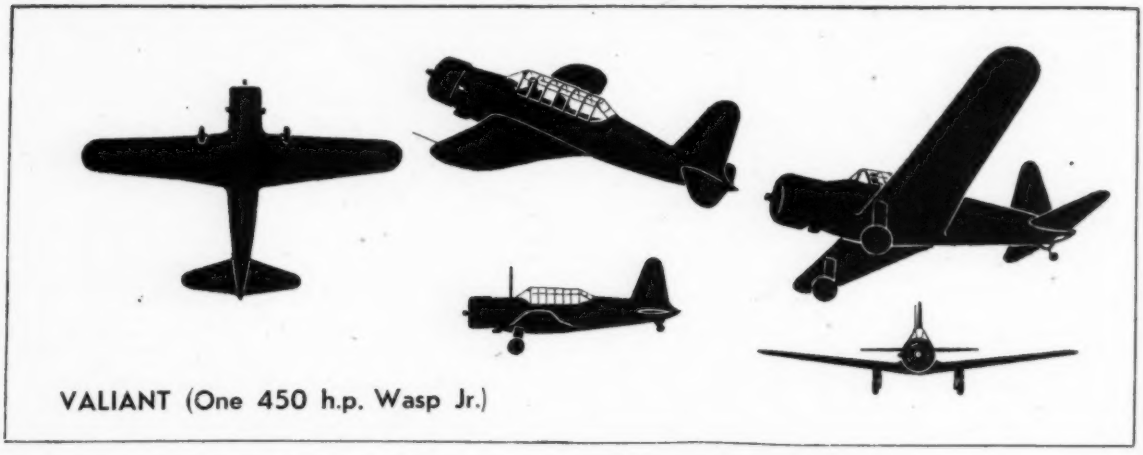
Sir A. Sinclair: I think the hon. Member had better read the White Paper.

Mr. Bevan: I should like to ask whether an opportunity will be afforded the House of having a discussion on it before we enter into discussions at Chicago?

Mr. Attlee: As I have already said, that is a matter for consideration through the usual channels.

Studies in Recognition

Aircraft in Flying Attitudes



VALIANT (One 450 h.p. Wasp Jr.)

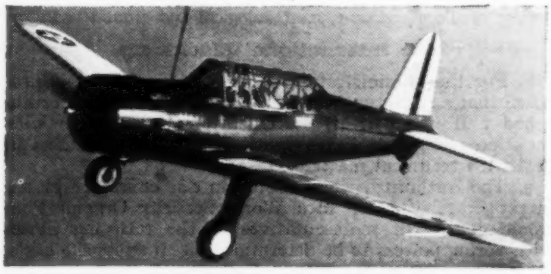
ALMOST every pilot in the U.S.A.A.F. and the U.S. Navy has flown a Vultee Valiant, for it is used almost exclusively in the basic period of their training. Not long ago the production of the 10,000th Valiant at the Consolidated Vultee factory at Downey, California, was the occasion for a little ceremony there on the score that it marked the first time in the history of U.S. aviation that 10,000 aircraft of the same model had been built within the walls of a single factory. In the U.S. Army the Valiant is the BT-13A, and in the Navy the SNV-1. There is also the BT-13B (Army) or SNV-2 (Navy), but the difference is merely a matter of a change in the wireless and electrical equipment. Yet another variant of the Valiant is the BT-15, which has a 420 h.p. Wright Whirlwind engine, but this is not used by the Navy. In fact, many A.A.F. BT-15 Valiants have been changed to BT-13s by replacing the Whirlwind by the Pratt and Whitney Wasp Jr.

Top speed of the BT-13A is 182 m.p.h. The BT-15, with the lower-powered Whirlwind engine is 176 m.p.h.

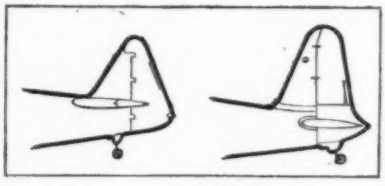
For purposes of comparison, the North American Harvard II (AT-6A) is also illustrated, since the two machines bear a general resemblance to each other and their overall dimensions are almost identical. There is, however, one very apparent difference, namely, that the Valiant has a fixed undercarriage while that of the Harvard (or Texan, to give it its A.A.F. name) is retractable. A glance at the top centre silhouette above, however, will show that the widely spaced, short legs of the Valiant's landing gear can easily be hidden from view and, when the aircraft is seen from a position only slightly above but well to one side, the foreshortening of the wings greatly reduces their recognition value. In these circumstances the Valiant is most promptly identified by its tail assembly in which a tall, symetrically tapered fin and rudder is set appreciably in advance of the tapered tailplane. Another point which can be seen from almost any position except dead ahead or astern is the comparatively long nose which projects well ahead of the leading edge. That of the Harvard is much shorter and the effect is accentuated by the bulge at the leading edge roots where the retracted wheels are housed.

From the side view, the long "glasshouse" covering the two tandem cockpits is virtually the same on both machines, but in plan the wings of the Valiant are seen to be of high aspect ratio and moderately tapered on both edges to semi-circular tips; those of the Harvard are backswept on the leading edge to angular tips and very slightly tapered on the trailing edge from the short, flat centre-section. Again, the tapered tailplane of the Valiant is in contrast to the "wing-nut" tailplane of the Harvard.

Incidentally, the Harvard I, which was the first American aircraft to be ordered in quantity for the R.A.F., had semi-circular wing tips and a curved trailing edge to the rudder. Moreover it was easily the noisiest thing flying, its ungeared Wasp engine with high airscrew tip speed making a terrific rasping sound. Dimensions of the Valiant are: Span 42ft., length 28ft., height 9ft. 1in., wing area 238 sq. ft.

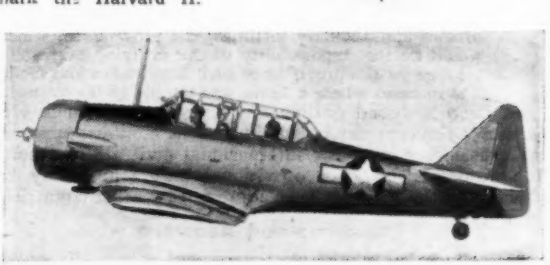


The Vultee Valiant (BT-13) trainer has high aspect ratio wings and tail surfaces and a fixed undercarriage.



The triangular fin and rudder of the Harvard II, with trailing edge well aft of the elevators (left) could hardly be confused with the tall vertical surfaces of the Valiant's tail.

All North American Harvards and Texans are characterised by the short radial-engined nose, wheels retracted close together right under the leading-edge wing roots and a pronounced backsweep. The raked, angular wing tips and "wingnut" tailplane mark the Harvard II.



The North American Harvard II (AT-6A) trainer has a short nose, backswept leading edge and retractable undercarriage.

"Indicator" Discusses Topics of the Day

To-morrow's Light Aircraft—II

Good View and Good Accommodation Essential : Grouping the Controls : Entry and Exit : Necessary Instruments : The End of Airscrew Swinging

IN the first of these two articles (published last week) I described some experiences while flying the last peace's *derniers cris* in the way of light aircraft, and tried to explain how so many of them failed in the trivial little details which can often be more important even than the layout as a whole. The owners and hirers of the future are going to be a great deal more critical than they once were, and it behoves the earnest designer to be almost as careful about such things as control positions and screen arrangements as he will undoubtedly be about the design of the aircraft as a flying machine.

One can suffer the loss of a few miles an hour, or even a stalling speed a few miles an hour higher than it might have been, but one cannot suffer brakes which are difficult to use, or unreliable ; screens through which one can only vaguely discern "men as trees walking" (and that only by the most painful stretching of the neck) ; or even fuel gauges which show little more than the fact that one *has* some petrol in the tank.

The present-day airfield—and consequently the airfield of the future—is so laid out that aircraft must keep either to the perimeter tracks or the runways. The former are very little wider than the average road, and carry all kinds of vehicles, so one's control must be instantaneous, instinctive and accurate, and one's view must be the best that can be obtained. For this reason, among others, I am in favour, eventually, of the tricycle layout, but even with the conventional arrangement there is surely no reason why the driving of an aircraft should involve one in neck-stretching contortions and in an unhappy triple struggle with the brake lever, the rudder and the throttle. If it continues to do so, then the self-flying public will be perpetually suffering from "taxi-ing neck," and the underwriters will get very tired of paying out sums to cover quite unnecessary ground accidents.

Tail-down Visibility

So, at whatever minor price in relative performance, the light aircraft of the future *must* have its engine mounted low and its crew sitting up high behind a large, clear windscreen ; the shallower the ground angle the better it will obviously be. If a pneumatic braking system, with the trigger conveniently on the stick, is too expensive for incorporation, then the cable-controlled or hydraulic system must be actuated by a lever which can be reached by the throttle hand and capable of being easily operated at the same time and in unison with the throttle.

I am not in favour of pedal-operated brakes unless they are very carefully placed in relation to the rudder controls and are insensitive in operation. Feet are very clumsy things, and even the experienced driver of American aircraft will still return with a sigh of relief to the trigger-differential system common to British aircraft. Incidentally, some attempt might be made to standardise the ratchet systems on aircraft brake levers. In pre-war days some manufacturers favoured the racing-car type, in which the button had to be pressed to engage, while others went in for the more normal kind ; either can be most dangerous in the hand of a pilot accustomed to using the other type. Probably it will be better to compromise by arranging the ratchet with only a few teeth for differential setting, and with some different kind of positive locking device for full-brake parking purposes.

As for the general view in the air, I have a feeling that the underwriters, if no one else, will demand some sort of standardisation of the field of view. Ideals are difficult to achieve, but it is better to have a really clear and unobstructed view in certain definite directions than to fly around in a semi-opaque glasshouse from which nothing can be really clearly seen in any direction—either because the moulded glass has been scratched, or because the glasshouse has so many supports and joints that everything is distorted. Give me a two-piece flat screen every time, with flat side-windows, and a driving position sufficiently far forward to give a little view over the leading edge. The roof is not terribly important so long as one can see something through it ; it will be so hot inside during the summer months that the curtains will be drawn most of the time.

Reflections and Focus

There are two cardinal errors in screen arrangement. One is to have the thing so curved, or sloped, that it is a mass of reflections, and the other is to have it too far from one's eyes. Even a scratched and dirty screen can be seen through if one's eys are within a few inches of it, while quite a clean screen gives one no impression of view if it is separated by a yard of strutted scuttle and is running a sort of Aurora Borealis display on its own whenever the aircraft's attitude alters in a bump. Let us have our screens not more than eighteen inches from the face, and let there be useful and draughtless bad-weather windows therein. And I'd much rather have a small, unobstructed screen than a large one with a mass of stiffening members all over it.

Flying machines, by their very shape, are always going to be difficult in the matter of doors and entries, and all we can hope for is a reasonable compromise. The high-wing monoplane can give a direct step entrance by an inevitably tiny door through which one steps smartly on to the compass, tearing one's trousers on the flap lever. The low-wing monoplane allows of reasonable door arrangements, but one is liable to fall on one's face on the wing roof while entering, and on one's back in the mud, after skidding down the centre-section, when alighting. I know of no aircraft into which my aged grandmother could climb without the help of a lot of strong men or a mobile crane, and without risking heart failure. Even the agile youngster will often tear muscles and lacerate shins while embarking or disembarking from the average small aircraft. Provided that the wing is not too steep and it has a good non-skid walkway, the best way into any low-wing aircraft is through the "roof."

Comfort or People ?

There seems to me to be little point in trying to make a private aircraft carry a lot of people in cramped discomfort and with no room for luggage. Far better to settle down to the idea that it is to be a two-seater with lots of elbow room and with accommodation for a couple of decent-sized suitcases which can be placed without undue muscle-strain. If anyone cares to be really ingenious, there's no objection to an arrangement by which the strapped and strengthened luggage tray can be made into a third seat for mere joy-flying. The great thing is to design the aircraft for a serious job and not to try and make it capable of a lot of purposes—in every one of which the occupants are uncomfortable to the *n*th degree.

As for the driver's seat, comfort, as such, is far less important than view and "reach." An armchair from which, in poorish weather, one is perpetually straining forward, is far less comfortable than a higher and more upright affair from which the world can be properly seen and all the controls reached with ease. There should be no need to stress the importance of a reasoned general control layout. As far as possible, all the incidental con-

TO-MORROW'S LIGHT AIRCRAFT

trols should be on one side, and it should never be necessary to change the stick-hand, either when flying or when taxying. To have the brake lever on one side and the throttle lever on another is a quite unforgiveable fault in design. Incidentally, there is no reason nowadays why the fore-and-aft trim shouldn't be of the tab variety—which is far more effective, powerful and reliable than any other—or why there shouldn't be some form of directional adjustment. Even a light rudder-load can be tiring over a long period, and the best of spring-torque balances, arranged to give "feet-off" flying at cruising speed and power, lose their tension in due course.

Flying Instruments

When it comes to the question of instrument requirements, one is inclined, after many hours on expensive military types, to demand a full blind-flying panel as a matter of course. A great deal will depend on the relative cost of free gyro instruments, but if these *are* still as expensive as they ever were, then we can comfort ourselves with the realisation that they are a luxury rather than a necessity for the sort of flying we are likely to do in a single-engined light aircraft. The directional gyro is a great convenience when flying on a continuous course in bumpy weather, and such an instrument might, in less perfect, precession-free, form be fitted as standard, with the simple and comparatively cheap turn indicator as one's basic emergency cloud-flying guide. A turn indicator is not, with the present-day kind of aircraft, quite the straightforward blind-flying instrument it used to be on the old biplane types; it still tells the same story, but the corrections are by no means as easily applied in an aircraft with modern characteristics.

Among incidental instruments, I place an oil temperature gauge at a high priority. Not only have we all become accustomed to reading it in concert with the pressure gauge, but it also gives reliable early information of incipient failure—thus saving an expensive engine, and giving one a chance to find a good field or even a genuine landing ground. Another thing we want is a fuel gauge (or gauges) which inform the pilot of the amount of fuel in his tanks, and not merely that a certain tank is either full or very nearly empty. An accurate and steady gauge is not an easy thing to design or to make, but certain people seem to have managed to do it with fair success during this war. Incidentally, my private aircraft must carry sufficient fuel for four hours' flying at cruising power, and three hours' safe at more or less any power, so that, even if the gauges go haywire, there will be no need to top up unnecessarily, and one can continue flying in safety back to base when the weather closes in.

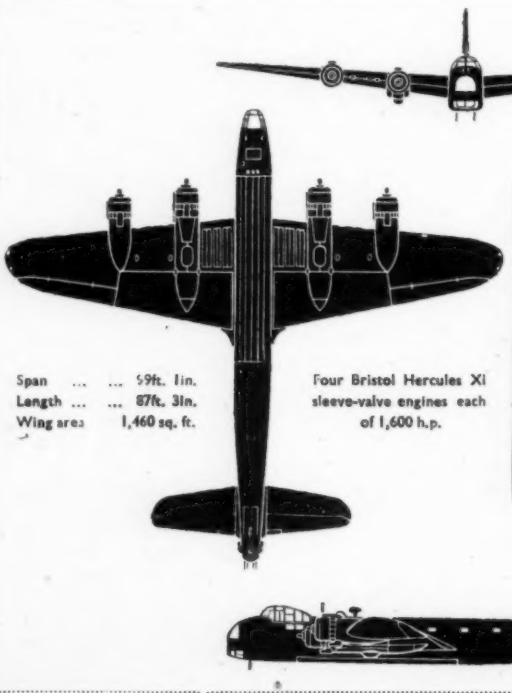
Starting Up

And, finally, no one will want an aircraft which cannot be reliably started without outside assistance. Airscrew-swinging is a dangerous and boring process, and one shouldn't have to probe inside a cowling in order to find a means of enriching the mixture, or priming the system. Generators, starter motors, and the sort of heavy-duty batteries which will stand up to the starting loads are very weighty items, but I'm quite sure that every owner—other than of the merest sports device or pop-bottle tourer—will demand them and will be prepared to sacrifice payload in other directions for the very considerable benefits offered.

Perhaps some form of inertia starter, with an emergency hand-winding dog, will be less likely to overload the battery and will permit the use of a slightly less heavy one. Needless to say, just as the good car-owner cranks his engine in order to free it during the winter months, so the amateur pilot will turn his motor round before taking to the starter—but there will usually be man-power available at his base, if he doesn't care to do it himself. The great thing is to have a convenient method of starting after an intermediate landing, or when no help is available. Most of us have had the horrifying and ridiculous experience, after swinging one's airscrew unassisted, of finding that the brakes are either off or not as powerful as they should be, with the engine running at a more than smart tick-over and the aircraft performing slow circles while one feverishly attempts to reach the throttle.

That's all.

INDICATOR.



Span ... ... 99ft. 1in.
Length ... ... 87ft. 3in.
Wing area 1,460 sq. ft.

Four Bristol Hercules XI sleeve-valve engines each of 1,600 h.p.

STIRLING IV. The most noticeable differences between the Mk. IV and earlier Stirlings are the absence of the dorsal turret and the substitution of a transparent fairing in place of the front gun-turret. The Stirling IV is employed for glider tug work and for supply dropping.

BRITAIN'S AID TO YUGOSLAVIA

SIR ARCHIBALD SINCLAIR, Secretary for Air, said in London last week that up to the end of last month nearly 7,000 tons of supplies had been sent to Yugoslavia by air, and nearly three times as much had been taken by sea.

Opening the "Yugoslavia Liberated" Exhibition in Regent Street, Sir Archibald said that the people of Yugoslavia, by standing in the tyrant's path in 1941, had gained precious time which was worth a great victory for the Allies.

MEMORIAL TO U.S. AIRMEN

PAID for by American airmen, work is nearing completion on the restoration of a 14th-century chapel at a church in Norfolk. The chapel will be a memorial to men missing or killed in action from the 96th Bombardment Group, and the Bishop of Norwich will preside at a ceremony on November 12.

The memorial window, produced by Reginald Ball, noted English designer, whose window work is displayed in Norwich Cathedral, incorporates in its design a figure of Christ with an American airman looking up at Him and the church spire, around which the bombers circle before heading for Nazi Europe, as well as the emblems of the Eighth Air Force.

The £597 needed to restore the chapel was raised by the Third Bombardment Division of the Group.

SEVEN hundred miles to a children's party and back the next day! Even though possible in 1939, it would have sounded ambitious, to say the least. But, when the war's great advances in aeronautical science can be built into high-speed, luxuriously equipped airliners, such journeys will be less tiring and far more comfortable than inter-suburban travelling today. Airspeed designers, inspired by an enthusiasm for civil air transport and equipped with long and unique experience, can be relied upon to produce fine airliners for the transport systems of the future.

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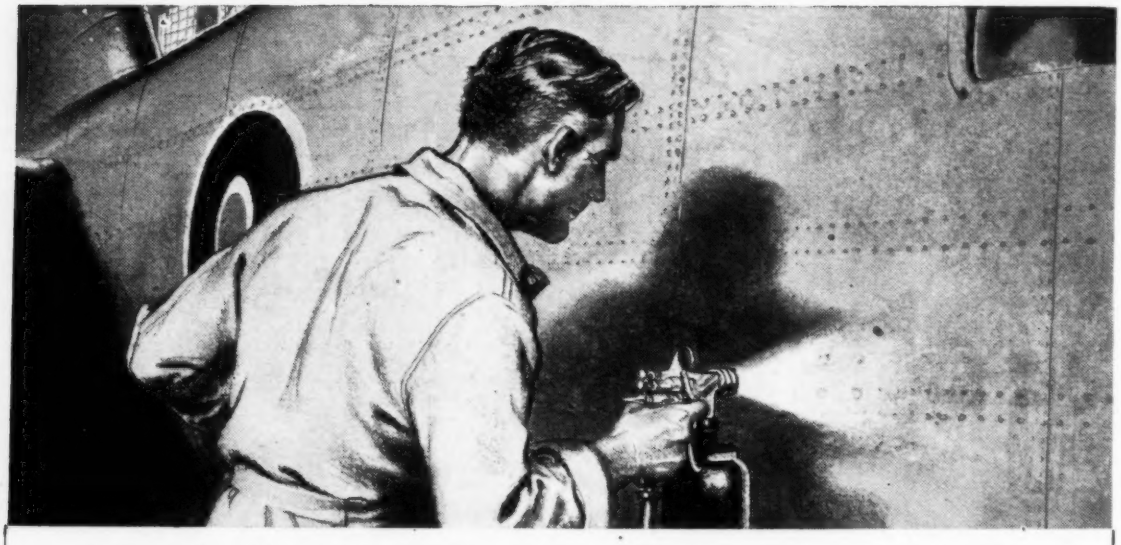

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AIRCRAFT ENGINEERING TRAINING

Rome Not Built in a Day

WITH reference to the letters appearing both for and against my remarks, I wish to reply to "F. J. P." in his letter in *Flight*, September 21st. Would he please read the letter in your issue of June 29th, by B. Reinard, and tell us if he agrees with it? My remarks intend to stress that only a good apprenticeship of five years as proposed by the S.B.A.C. or something on similar lines can produce a really sound craftsman. The apprentice from Halton after two years is not on a par with his predecessor of three years. He acquires it later by use and more teaching." It amounts to "Rome not being built in a day," and you will not build first-class craftsmen as B. Bernard expects, and I am equally sure "F. J. P." agrees. I like the latter's comments; they are fair.

One more word—I was not having my leg pulled!

F. ASHBY.

CHICAGO CONFERENCE

Loading the Dice Against Ourselves

NOW that the international conference on civil aviation is fixed and is to take place on November 1st in Chicago, it is too late to observe that its timing is somewhat premature. We and the other nations of the world have to be represented to state our claims to a post-war share in international air transport and to help to establish a maximum measure of co-operation.

But as realists we should not overlook the fact that the conference has been arranged at the instance of the only Power which at the ring of a bell is ready to "go." One cannot help feeling that the timing of the conference is such as to give our friends across the Atlantic the best opportunity to promote the interests of their highly developed, highly efficient and productive aircraft and air line industry. For the promotion of these commercial interests they have a range of weapons at their disposal not excluding the all-powerful lease-lend.

While it is hoped that at the Empire Conference issues involving the British Commonwealth will be clarified, one regrets the fact that no opportunity was given here to ventilate the public's views before any binding undertakings are entered upon at Chicago.

If the nations of the world are not to be dragooned into agreements which, though advantageous to some, may jeopardise the interests of others, the sponsors of the conference will have to give it a truly international lead and not seek to exploit their temporary technological and material superiority.

A good deal of international co-operation has been achieved during this war. The Chicago conference will provide the acid test of the maturity and ability of the nations to continue to do so in peacetime.

The progress of the conference will be, therefore, anxiously followed up by all those who hope to see air transport as a true link between nations.

"HANDS ACROSS THE OCEAN."

POST-WAR OWNER PILOTS

They Will Still Need a Car

"INDICATOR" raised some very interesting points in his article on "Post-war Private Ownership (*Flight*, Sept. 7th). It surprises me that more people have not voiced their opinions on the matter. Is it lack of interest? I sincerely hope not.

I should like to put two questions to the prospective post-war owners.

First of all, do you think that you can afford to own and run both a car and an aircraft? For a long time, probably at least a decade, aircraft will remain an adjunct to travel by car. For plain all-round transport utility a car cannot at present be beaten, and the great majority of people faced with the prospect of owning either a car or an aircraft—but not both—would choose a car.

The second question, probably trivial at first glance, is this: If for any reason (bad weather, for instance), you had to leave your aircraft at your destination instead of flying it back to your departure point (home), how would you get it back again? You yourself could return home by road or rail, or possibly air-liner, but the aircraft is a different proposition.

Having carefully considered these two points, re-read "Indicator's" article and ask yourself which would be the simpler, cheaper and more useful alternative—owning your own aircraft or borrowing one.

Personally, I visualise a very poor market for light aircraft in this country if we are to rely on small clubs and private owners to buy them. A small market for many very obvious reasons will jeopardise our position in post-war aviation. Colonel Fitzmaurice in his article (*Flight*, Oct. 5th) gives further reasons for building up our aircraft industry. Without a big demand for British aircraft this country would soon cease to compete in British or overseas markets.

And if anyone requires proof of this, just consider the state of affairs in this country before the war. Not only was America obtaining large export markets, she was invading Britain and making great strides in capturing our light aircraft market.

A nation-wide hire service such as "Indicator" suggests is a national requirement. By the consequent need for having a large fleet of aircraft, such a service would require far more aircraft than would private owners and clubs together.

Mr. Handasyde, in his letter (*Flight*, Sept. 21st), suggested that co-operation between flying clubs might produce the solution. I wish it could, but co-operation between small, widely dispersed sections does not seem to have been very successful in this country in the past.

I would like to express my appreciation to Colonel Fitzmaurice for a very sound article, especially his suggestion for A.O.P.A.

J. M. DOWNTON.

INVASION TACTICS

Theory Upheld by Events

I WAS interested in the reply of Mr. G. Borg-Myatt (*Flight*, September 28th) to my previous letter. I would like to point out that my letter was written before the invasion of France, and that the theme of my letter has been upheld by the course of the recent fighting in France and Holland.

It is a good thing that some of the bridges were not destroyed by bombing, which is a different story to that told by some newspapers.

I would like to suggest that the aircraft which were used to drop bombs on some of the bridges would have been far more usefully employed to drop paratroops and airborne infantry to capture and hold the most strategic bridges. This actually was the case at Njimegen, and the gallant but unsuccessful attempt at Arnhem, which some reports suggest would have succeeded if a few hundred more men had been dropped in the initial stages of the attack.

Mr. G. Borg-Myatt says that the elimination of strategic points in the enemy's defensive area means the difficulty of replacements and supplies, and the wiping out of most of the enemy. He also claims that a routed enemy does not and cannot hamper temporary bridging.

First, if a bridge were destroyed by bombing, a most difficult and costly task to begin with, the enemy could, if necessary, construct temporary bridges, in a few hours, along which reinforcements and supplies could be sent. And, presumably, as many as possible of the enemy would escape by means of temporary bridges, while only a small number holding the end of the bridge would be captured.

Secondly, to say that a retreating enemy cannot hamper temporary bridging is surely a mistake. I think that if Mr. G. Borg-Myatt, as an army engineer, were attempting to construct a temporary bridge over a river, with the enemy on the far side, he might have a different opinion.

I do not agree with Mr. G. Borg-Myatt when he says that Germany overran defenceless countries in 1940. Surely France was not defenceless.

It is my belief that the use of aircraft will completely change the art of warfare. An air force with an airborne army that can fight in the air, over the sea, and on the land will be far more useful in the future than a force that can fight in only one element. Moreover, this airborne army would be particularly useful in keeping the peace after this war, as it could be transferred to the source of any trouble almost immediately.

R. HUDSON.

ANOTHER BLOW: Pilots and machines of a Tempest wing operating from Belgium. Whilst in England the wing shot down nearly 650 flying bombs. Note the long-range tanks and submerged cannon.

SERVICE AVIATION

Royal Air Force and Fleet Air Arm News and Announcements

Retirement

GENERAL DUTIES BRANCH.

Group Capt. W. H. PRIMROSE, C.B.E., D.F.C., reverts to the retired list retaining the rank of Air Commodore. October 5th, 1944.

Awards

THE KING has been graciously pleased to approve the following awards in recognition of gallantry displayed in flying operations against the enemy:—

Bar to Distinguished Service Order

Sqn. Ldr. E. K. CRESSWELL, D.S.O., D.F.C., R.A.F.V.R., No. 35 Sqn.—This officer has completed a very large number of sorties against a wide range of targets, many of them far into enemy territory. Recently he has participated in numerous attacks on enemy railway sidings. He has spent protracted periods over the target and his example of skill, courage and determination has won great praise.

Sqn. Ldr. D. J. SHANNON, D.S.O., D.F.C., R.A.A.F., No. 617 Sqn.—Since the award of a bar to the D.F.C., Sqn. Ldr. Shannon has completed many sorties which he has executed with outstanding resolution and success. He has at all times displayed courage and fortitude of a high order, and his appreciation of the responsibilities entrusted to him have set a fine example to all.

Distinguished Service Order

Act. Sqn. Ldr. H. HOPKINSON, R.A.F.V.R., No. 253 Sqn.—Since assuming command of his squadron this officer has led many operations against enemy coastal shipping and has also attacked installations, locomotives and mechanical transport, with considerable success. He has flown on a number of bomber escort missions and on at least one occasion was instrumental in successfully repulsing an attack by enemy fighters. On another occasion, Sqn. Ldr. Hopkinson was forced to make a crash landing in Yugoslavia after his aircraft had been badly damaged by anti-aircraft fire. The aircraft overturned on landing, but after two and a half hours working inside the cockpit, he eventually managed to extricate himself through the hatchway in the fuselage and ultimately returned to his squadron. This officer has set an example which has contributed to the high standard of operational proficiency of his squadron.

Flt. Lt. W. LeR. FOOTE, R.C.A.F., No. 626 Sqn.—This officer and airman were captain and mid-upper gunner respectively of an aircraft detailed to attack Stuttgart. *En route* the aircraft was attacked by a fighter and sustained much damage. The rear gunner was killed, and Flt. Sgt. Smith was blown out of his turret into the fuselage. He was, however, uninjured, and returned to his turret. A fire started in the rear of the fuselage which betrayed the position of the bomber to the enemy and the aircraft was subjected to five successive attacks. Nevertheless, Flt. Lt. Foote skilfully manœuvred the aircraft and enabled Flt. Sgt. Smith to engage the fighter, which was seen to fall away in flames. Flt. Lt. Foote then continued to the target and completed his mission. This officer and airman have taken part in many sorties and have displayed a high standard of courage and devotion to duty.

Group Capt. S. Smith, D.S.O., A.F.C. (ret.), who has been appointed Commandant of London Command Air Training Corps.

F/O. K. H. PERRY, R.A.F.V.R., No. 7 Sqn.—In July, 1944, this officer was captain of an aircraft detailed to attack Hamburg. Shortly after leaving the target area his aircraft was hit by three anti-aircraft shells and burst into flames. The pilot's cockpit became a mass of flames and F/O. Perry was overcome by the smoke and fumes. The bomber dived steeply. When he recovered, only by superhuman efforts was he able to pull the bomber out of its dive. As the fires were still burning, F/O. Perry rallied his crew together and, after they had extinguished the flames, he endeavoured to fly his badly damaged aircraft to base. The long sea crossing was accomplished at a height of 3,000ft and only two engines were serviceable. Nevertheless, displaying great coolness and courage, this officer eventually effected a crash landing on an airfield in this country. F/O. Perry has completed very many operations and throughout he has set a fine example of courage and devotion to duty.

Wing Cdr. A. MARKLAND, D.F.C., D.F.M., R.A.F.V.R., No. 78 Sqn.—Wing Cdr. Markland has completed many sorties on his second tour of operations. He has displayed high powers of leadership, skill and determination, qualities which have been reflected in the operational efficiency of the squadron he commands.

Act. Wing Cdr. R. D. RUSSELL, D.F.C., R.C.A.F.—In recent intensive air operations the squadrons under the command of Wing Cdr. Russell have completed a large number of sorties. Within a period of three days a very lage number of enemy transport vehicles were attacked, of which 127 were set on fire and a bigger number were damaged. In addition, four hostile aircraft were destroyed and seventeen tanks and nineteen other

SERVICE AVIATION

armoured vehicles were damaged. By his masterly leadership, sound judgment and fine fighting qualities, Wing Cdr. Russell played a good part in the success achieved. His example inspired all.

F/O. A. R. BRODRICK, R.A.F.V.R., No. 2 Sqn.—This officer has completed a large number of reconnaissances, and his great skill and determination have been proven by the excellent photographs he has secured. In August, 1944, he was detailed to reconnoitre an enemy headquarters south of Caen. The target proved to be heavily defended, and F/O. Brodrick was met by a hail of shells. Defying the barrage, he maintained a straight course over the objective. When about to leave the target area the aircraft was hit in several places. The pilot's cockpit was shattered and F/O. Brodrick was badly wounded. Undaunted, this brave pilot set course for base, where he made a safe landing. Almost immediately afterwards he fainted through loss of blood. In the successful execution of a vital task this officer displayed the finest qualities of skill, courage and endurance.

Act. Wing Cdr. J. R. WHELAN, D.F.C., R.A.F.O., No. 680 Sqn.—This officer has commanded the squadron since June, 1942. During the period he has completed a very large number of photographic reconnaissances and has displayed the highest qualities of skill, courage and leadership. By his untiring zeal, initiative and excellent organising ability he has contributed in a large way to the successes of the squadron, which has undertaken many notable missions, the results of which were of immense value.

Second Bar to Distinguished Flying Cross

Sqn. Ldr. E. B. BUTLER, D.F.C., R.A.F.V.R., No. 630 Sqn.—Since joining his squadron in December, 1943, Sqn. Ldr. Butler has taken part in attacks on many strongly defended targets in Germany, including Berlin, Brunswick and the Ruhr. He is a navigator of high merit, and his technical skill has contributed greatly to the success of operations. This officer has used his knowledge and experience to the full in assisting less experienced navigators. His enthusiasm and unfailing determination make him an invaluable officer to his squadron.

Sqn. Ldr. R. O. CALVERT, D.F.C., R.N.Z.A.F., No. 630 Sqn.—Since joining this squadron in January, 1944, Sqn. Ldr. Calvert has taken part in attacks against many strongly defended targets in Germany, including Berlin and Leipzig. He has consistently shown skill, determination and reliability, and, as captain of aircraft, he has set a high standard to the other members of his squadron. His operational experience and enthusiasm have been invaluable in the training of new crews.

Bar to Distinguished Flying Cross

Flt. Lt. R. H. KNIGHTS, D.F.C., R.A.F., No. 101 Sqn.—Flt. Lt. Knights has maintained a high standard of operational flying during his tour of duty. Since the award of the D.F.C. he has continued to display great courage and determination. His zeal and untiring energy have made him of great value to his squadron.

Flt. Lt. H. J. SANDERSON, D.F.C., R.A.F.V.R., No. 139 Sqn.—Flt. Lt. Sanderson has completed many operational sorties, including eight anti-submarine patrols. He is now on his second tour of operations and has at all times displayed the greatest keenness and determination.

Flt. Lt. I. F. B. WALTERS, D.F.C., R.A.F., No. 201 Sqn.—Since joining this squadron in March, 1945, Flt. Lt. Walters has displayed great zeal and devotion to duty. He has devoted much time and care to the training of new crews. On one occasion in 1944 he was engaged in an anti-submarine patrol when a U-boat was sighted. An accurate and telling attack was made, and the submarine was probably destroyed. While on operations Flt. Lt. Walters has invariably shown untiring energy and a fine fighting spirit.

Flt. Lt. C. A. S. DREW, D.F.C., R.A.F.V.R., No. 83 Sqn.—Throughout his tour of operations, this officer has achieved a splendid record. On one occasion, in spite of adverse weather and his aircraft being engaged by heavy enemy fire, six runs were made over the target before Flt. Lt. Drew was satisfied with the accuracy of his aim. His enthusiasm and unfailing determination to complete his duty make this officer invaluable to his squadron.

Flt. Lt. A. W. LISTER, D.F.C., R.A.F.V.R., No. 35 Sqn.—This officer has an outstanding operational record. He has always displayed great keenness and determination and has proved himself to be a most reliable air bomber. The excellent bombing results achieved by Flt. Lt. Lister have set a very high standard.

Flt. Lt. D. H. PIDDING, D.F.C., R.A.F.V.R., No. 83 Sqn.—Since the award of the D.F.C., Flt. Lt. Pidding has completed numerous sorties against heavily defended enemy targets. On all occasions he has displayed exceptional qualities of leadership and he has a fine record of successes. His achievements are worthy of the highest praise.

Flt. Lt. J. N. G. WYATT, D.F.C., R.A.F.V.R., No. 83 Sqn.—Since the award of the D.F.C., Flt. Lt. Wyatt has participated in further numerous sorties with outstanding success. He has a fine operational record and his skill as a navigator has frequently been instrumental in bringing back a damaged aircraft safely to base. His enthusiasm and unfailing determination to complete his missions are worthy of high praise.

AIRBORNE ARMOUR: A seven-ton Tetrarch light tank being carefully manoeuvred into a General Aircraft Hamilcar glider. This combination gave the Germans one of their biggest surprises on D-Day.

Act. Wing Cdr. J. R. H. MERIFIELD, D.S.O., D.F.C., R.A.F.V.R., No. 540 Sqn.—Since the invasion of Northern France the squadron has completed many sorties against enemy communication systems and military installations. Much success has been achieved in which Wing Cdr. Merifield has played a leading part. He planned the missions, advised of the tactics to be adopted, and invariably undertook the more dangerous tasks himself. On two of these his brilliant work was well proved by the perfection of the photographs which he secured.

Act. Wing Cdr. D. W. STEVENTON, D.S.O., D.F.C., R.A.F., No. 544 Sqn.—This officer is in command of the squadron to which many missions have been assigned since the invasion of Northern France. In the planning and execution of these operations, Wing Cdr. Steventon has displayed outstanding skill and tactical ability and much of the success achieved can be attributed to his sterling work. On two occasions, Wing Cdr. Steventon successfully completed sorties which demanded the highest standard of skill and courage. The photographs which he secured were a splendid testimony to his outstanding efforts.

Flt. Lt. F. R. L. MELLERSH, D.F.C., R.A.F.V.R., No. 96 Sqn.—This officer has proved himself to be a night fighter pilot of outstanding ability and determination and his skill and keenness have set an excellent example. Flt. Lt. Mellersh has completed many sorties and has destroyed eight enemy aircraft; he has also destroyed a large number of flying bombs.

Flt. Lt. A. D. DOBSON, D.F.C., R.A.F.V.R., No. 76 Sqn.—This officer has an excellent operational record. He is a navigator of high merit and has participated in a large number of sorties against the most heavily defended objectives. The success of many of these sorties has been largely due to Flt. Lt. Dobson's undoubted skill and accuracy. He has also been responsible for the organising of a flight navigation section and the training of all new crews, a task which he has executed brilliantly. His devotion to duty has been unfailing.

Flt. Lt. P. F. L. HALL, D.F.C., R.N.Z.A.F., and F/O. R. D'A. MARRIOTT, D.F.C., R.A.F.V.R., both of No. 488 (N.Z.) Sqn.—As pilot and observer respectively these officers continue to display the highest standard of skill and gallantry. Recently, within a short period they have destroyed four enemy aircraft, bringing their victories to eight.

Act. Flt. Lt. L. W. F. STARK, D.F.C., R.A.F.V.R., No. 263 Sqn.—Flt. Lt. Stark has completed a large number of sorties. He has led his flight against many difficult and dangerous targets, and despite heavy enemy opposition he has always pressed home his attacks to a successful conclusion. His excellent leadership, courage and fine fighting spirit have set a splendid example to all.

F/O. W. H. MILLER, D.F.C., R.A.F.V.R., and F/O. F. C. BONE, D.F.C., R.A.F.V.R., both of No. 169 Sqn.—These officers, as pilot and observer respectively, have completed many sorties. They have displayed a high degree of skill and co-operation, and their keenness to engage the enemy has been most evident. They have destroyed ten hostile aircraft.

Act. Wing Cdr. A. K. GATWARD, D.S.O., D.F.C., R.A.F.V.R., No. 404 (R.C.A.F.) Sqn.—This officer has led the squadron with great skill and gallantry in many sorties. In July, 1944, he participated in an operation which resulted in the destruction of an enemy convoy, comprising three medium-sized merchant vessels and six escorting ships. In August, 1944, Wing Cdr. Gatward led his squadron in an attack on a target in the Gironde area. During the operation his aircraft was repeatedly hit by anti-aircraft fire and sustained serious damage. Nevertheless, he flew safely to base in the face of great difficulty. This officer has displayed leadership of the highest order.

Act. Sqn. Ldr. J. R. COLLINS, D.F.C., R.A.F.V.R., No. 245 Sqn.—Since being awarded the D.F.C., this officer has undertaken many sorties on which the enemy has been greatly harassed and many of his transport and armoured vehicles have been destroyed. He is a brave and resolute fighter and has set a fine example to all.

Act. Sqn. Ldr. H. C. TRAINOR, D.F.C., R.C.A.F., No. 401 (R.C.A.F.) Sqn.—On many occasions recently, Sqn. Ldr. Trainor has led the squadron on a variety of sorties and has displayed excellent tactical ability and great resolution. On one occasion a very superior number of enemy fighters were engaged and eight of them were shot down, one of them by Sqn. Ldr. Trainor, who displayed great skill and determination throughout the fight. This officer has shot down at least nine enemy aircraft.

F/O. G. N. E. YEATES, D.F.C., R.A.F.V.R., No. 248 Sqn.—Within recent months this officer has completed many reconnaissances and has participated in numerous successful attacks on enemy shipping. He is a gallant and tenacious fighter and has set a fine example in pressing home his attacks in the face of heavy opposing fire. In August, 1944, F/O. Yeates attacked a medium-sized merchantman, inflicting much damage. Afterwards he attacked two anti-aircraft gun positions on the mainland.

Flt. Lt. P. H. G. WINTLE, D.F.C., R.A.F.V.R., No. 140 Sqn.—This officer has completed many sorties during his second tour of operations, including many low-level attacks. On one of these sorties he was detailed to obtain some vitally important photographs. After completing his mission in the most adverse weather, his aircraft was attacked on his return flight by twelve Fw 190s. For twelve minutes he was subjected to continuous determined attacks. By superb airmanship he eventually shook off his attackers despite heavy damage to his aircraft from cannon and machine-gun fire. Flt. Lt. Wintle has set an inspiring example of exceptional coolness, courage and great devotion to duty.

F/O. J. T. HUTCHINSON, D.F.C., R.A.F.V.R., No. 138 Sqn.—This officer has displayed the highest standard of skill and devotion to duty. His keenness to continue operating with the squadron although he has finished his second tour is worthy of the highest praise, and sets a fine example to the squadron.

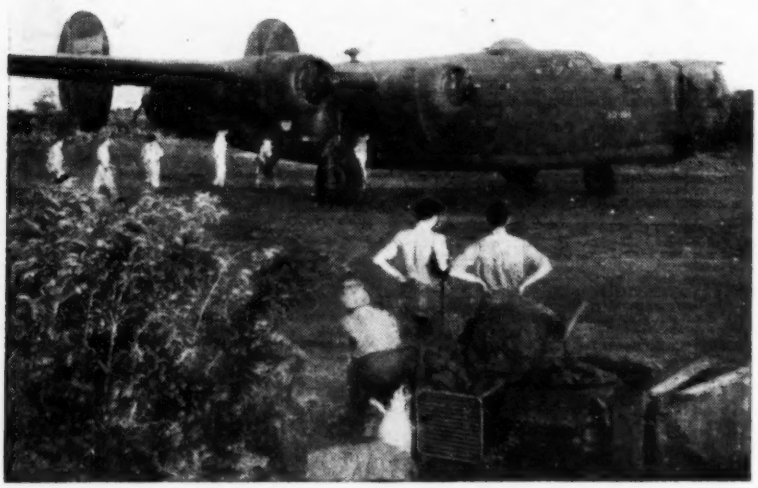
Distinguished Flying Cross

Wing Cdr. D. J. McGLINN, R.A.F., No. 214 Sqn.
Wing Cdr. E. K. PIERCY, R.A.F., No. 106 Sqn.
Wing Cdr. L. M. WHETHAM, A.F.C., R.A.F.O., No. 35 Sqn.
Sqn. Ldr. K. MACALEAVEY, R.A.F.V.R., No. 550 Sqn.
Sqn. Ldr. T. H. SPROULLE, R.A.F.V.R., No. 640 Sqn.
Sqn. Ldr. R. W. WESTON, R.A.F.V.R., No. 83 Sqn.
Flt. Lt. F. F. ADDINGTON, R.A.F.V.R., No. 224 Sqn.
Flt. Lt. D. M. ALLAN, R.A.F.V.R., No. 99 Sqn.
Flt. Lt. E. BALDWIN, D.F.M., R.A.F., No. 139 Sqn.
Flt. Lt. P. M. BRANTON, R.A.F.V.R., No. 489 (N.Z.) Sqn.
Flt. Lt. G. H. BRODIE, R.A.F.V.R., No. 99 Sqn.
Flt. Lt. T. M. CLUTTERBUCK, R.A.F.V.R., No. 540 Sqn.
Flt. Lt. L. C. E. DEVIGNE, R.A.F.V.R., No. 627 Sqn.
Flt. Lt. J. R. EMMERSON, A.F.M., R.A.F.V.R., No. 109 Sqn.
Flt. Lt. A. McFADZEAN, R.A.F.V.R., No. 45 Sqn.

Flt. Lt. T. N. Rosser, R.A.F.V.R., No. 681 Sqn.
Flt. Lt. J. S. Wilkinson, R.A.F.O., No. 53 Sqn.
Flt. Lt. J. R. Anderson, D.F.M., R.A.F.V.R., No. 61 Sqn.
Flt. Lt. F. K. Brown, R.A.F.V.R., No. 433 (R.C.A.F.) Sqn.
Flt. Lt. D. J. Clark, R.A.F.V.R., No. 77 Sqn.
Flt. Lt. P. Crossley, R.A.F., No. 99 Sqn.
Flt. Lt. D. Evans, R.A.F.V.R., No. 10 Sqn.
Flt. Lt. H. Fogg, D.F.M., R.A.F.V.R., No. 427 (R.C.A.F.) Sqn.
Flt. Lt. S. E. J. Jones, D.F.M., R.A.F.V.R.
Flt. Lt. H. B. F. Lymna, D.F.M., R.A.F., No. 7 Sqn.
Flt. Lt. R. W. Mathers, R.A.F., No. 9 Sqn.
Flt. Lt. S. J. Mancekivell, D.F.M., R.A.F.V.R., No. 9 Sqn.
Flt. Lt. A. O'Hara, D.F.M., R.A.F.V.R., No. 109 Sqn.
Flt. Lt. P. F. Woolland, D.F.M., R.A.F.V.R., No. 109 Sqn.
F/O. I. G. Barham, R.A.F.V.R., No. 514 Sqn.
F/O. J. L. Birch, R.A.F.V.R., No. 156 Sqn.
F/O. D. McK. Blackmore, R.A.F., No. 625 Sqn.
F/O. I. J. Bowen, R.A.F., No. 460 (R.A.A.F.) Sqn.
F/O. W. H. A. Bradshaw, R.A.F.V.R., No. 10 Sqn.
F/O. A. S. Calder, R.A.F.V.R., No. 205 Sqn.
F/O. J. Dearden, R.A.F.V.R., No. 542 Sqn.
F/O. W. H. A. Dick, R.A.F.V.R., No. 102 Sqn.
F/O. M. A. Elliott, R.A.F.V.R., No. 576 Sqn.
F/O. J. Fielden, R.A.F.V.R., No. 544 Sqn.
F/O. J. Galloway, D.F.M., R.A.F.V.R., No. 100 Sqn.
F/O. E. Grace, R.A.F.V.R., No. 158 Sqn.
F/O. J. C. D. Guthrie, R.A.F.V.R., No. 50 Sqn.
F/O. A. W. Hallam, R.A.F.V.R., No. 207 Sqn.
F/O. C. G. Hockney, R.A.F.V.R., No. 45 Sqn.
F/O. G. C. D. Hunter, R.A.F.V.R., No. 544 Sqn.
F/O. I. K. Jarrett, R.A.F.V.R., No. 10 Sqn.
F/O. S. Johnson, R.A.F.V.R., No. 207 Sqn.
F/O. J. L. Kennedy, R.A.F.V.R., No. 192 Sqn.
F/O. T. R. Lister, R.A.F.V.R., No. 158 Sqn.
F/O. S. J. Mason, R.A.F.V.R., No. 428 (R.C.A.F.) Sqn.
F/O. J. S. Middleton, R.A.F.V.R., No. 9 Sqn.
F/O. J. A. Newberry, R.A.F.V.R., No. 515 Sqn.
F/O. E. W. Norman, R.A.F.V.R., No. 100 Sqn.
Flt. Lt. W. J. Barclay, R.A.A.F., No. 156 Sqn.
Flt. Lt. A. N. Gould, R.A.A.F., No. 149 Sqn.
Flt. Lt. C. R. G. Grant, D.F.M., R.A.A.F., No. 109 Sqn.
Flt. Lt. J. R. Hancock, R.A.A.F., No. 9 Sqn.
Flt. Lt. L. Hawes, R.A.A.F., No. 467 (R.A.A.F.) Sqn.
Flt. Lt. A. A. Lange, R.A.A.F., No. 90 Sqn.
F/O. E. L. J. Anderson, R.A.A.F., No. 45 Sqn.
F/O. T. C. Drake-Brockman, R.A.A.F., No. 466 (R.A.A.F.) Sqn.
F/O. D. E. Girardau, R.A.A.F., No. 10 Sqn.
F/O. W. A. Goold, R.A.A.F., No. 607 Sqn.
Sqn. Ldr. R. C. Lindsell, R.C.A.F., No. 60 Sqn.
Sqn. Ldr. G. B. Philbin, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
Flt. Lt. C. A. Burns, R.C.A.F., No. 220 Sqn.
Flt. Lt. V. E. Camacho, R.C.A.F., No. 59 Sqn.
Flt. Lt. E. G. Cliff, R.C.A.F., No. 415 (R.C.A.F.) Sqn.
Flt. Lt. C. D. Stevens, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
Flt. Lt. R. E. Boe, R.C.A.F., No. 419 (R.C.A.F.) Sqn.
Flt. Lt. A. G. Gardner-Medwin, R.C.A.F., No. 424 ((R.C.A.F.) Sqn.
Flt. Lt. J. H. Keane, R.C.A.F., No. 434 (R.C.A.F.) Sqn.
Flt. Lt. M. Kogon, R.C.A.F., No. 428 (R.C.A.F.) Sqn.

SERVICE AVIATION

Flt. Lt. D. Rodger, R.C.A.F., No. 617 Sqn.
Flt. Lt. R. W. Wright, D.F.M., R.C.A.F., No. 405 (R.C.A.F.) Sqn.
Flt. Lt. G. P. A. Yates, D.F.M., R.C.A.F., No. 405 (R.C.A.F.) Sqn.
F/O. F. D. Jackman, R.C.A.F., No. 422 (R.C.A.F.) Sqn.
Capt. A. J. Van Amerongen, S.A.A.F., No. 15 (S.A.A.F.) Sqn.
Lt. L. G. Van Renen, S.A.A.F., No. 15 (S.A.A.F.) Sqn.
F/O. E. B. Sillito, R.A.F.V.R., No. 540 Sqn.
F/O. K. L. Smith, R.A.F.V.R., No 113 Sqn.
F/O. J. D. Taylor, R.A.F.V.R., No. 236 Sqn.
W/O. L. R. Cole, R.A.F., No. 205 Sqn.
W/O. R. J. ockwood, R.A.F.V.R., No. 113 Sqn.
Wing Cdr. J. M. Birkin, A.F.C., R.A.F.V.R., No. 571 Sqn.
Flt. Lt. J. McK. McAllister, R.A.F.V.R., No. 218 Sqn.
Flt. Lt. D. Welfare, R.A.F.V.R., No. 239 Sqn.
F/O. D. B Bellis, R.A.F.V.R., No 239 Sqn.
Flt. Lt. J. A. Y. Cote, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
Flt. Lt. J. P. L. Dupuis, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
F/O. L. J. Gornall, R.A.F., No. 138 Sqn.
F/O. H. A. Hooper, R.A.F.V.R., No. 571 Sqn.
P/O. F. R. Edmondson, R.C.A.F., No. 433 (R.C.A.F.) Sqn.
P/O. L. D. Gregory, R.A.F.V.R., No. 141 Sqn.
P/O. D. H. Stephens, R.A.F.V.R., No 141 Sqn.
P/O. J. L. James, R.C.A.F., No. 433 (R.C.A.F.) Sqn.
P/O. J. E. Mitchell, R.C.A.F., No. 433 (R.C.A.F.) Sqn.
P/O. S. B Taylor, R.A.F.V.R., No. 550 Sqn.
P/O. W. Thomson, R.A.F.V.R., No. 115 Sqn.
W/O. W. D. McAdam, R.C.A.F., No. 420 (R.C.A.F.) Sqn.
F/O. H. G. Phillips, R.A.F.V.R., No. 578 Sqn.
F/O. E. Wallis, R.A.F., No. 101 Sqn.
F/O. A. T. Youdan, R.A.F.V.R., No. 467 (R.A.A.F.) Sqn.
F/O. G. A. J. Wood, R.A.F.V.R., No. 576 Sqn.
F/O. B. F. Durrant, R.A.F.V.R., No. 106 Sqn.
P/O. G. G. Bellamy, D.F.M., R.A.F.V.R., No. 405 (R.C.A.F.) Sqn.
P/O. A. C. Blackie, R.A.F.V.R., No. 576 Sqn.
P/O. A. W. W. Braine, R.A.F.V.R., No. 149 Sqn.
P/O. L. S. Buckingham, R.A.F.V.R., No. 100 Sqn.
P/O. S. W. Carter, R.A.F., No. 207 Sqn
P/O. E. M. Cottrell, R.A.F., No. 101 Sqn.
P/O. J. M. Denton, R.A.F.V.R., No. 207 Sqn.
P/O. K. P. C. Doyle, R.A.F.V.R., No. 156 Sqn.
P/O. W. Fox, R.A.F.V.R., No. 578 Sqn.
P/O. N. Gilroy, R.A.F.V.R.
P/O. H. T. Griffin, R.A.F.V.R., No. 156 Sqn.
P/O. W. H. Griffiths, R.A.F.V.R., No. 429 (R.C.A.F.) Sqn.
P/O. A. R. W. Hardes, R.A.F.V.R., No. 433 (R.C.A.F.) Sqn.
P/O. J. M. Hesp, D.F.M., R.A.F.V.R., No. 100 Sqn.
P/O. G. D. Hooton, R.A.F.V.R., No. 97 Sqn.
P/O. T. G. Lincoln, R.A.F.V.R., No. 158 Sqn.
P/O. I. C. Macarthur, R.A.F.V.R., No. 149 Sqn.
P/O. V. J. C. Miles, R.A.F.
P/O. A. J. Owen, R.A.F.V.R., No. 166 Sqn.
P/O. G. C. Roe, R.A.F.V.R., No. 10 Sqn.
P/O. C. A. Skinner, R.A.F.V.R., No 207 Sqn.
P/O. R. J. Taylor, R.A.F.V.R., No. 10 Sqn.
P/O. R. R. Waughman, R.A.F.V.R., No. 101 Sqn.
P/O. J. A. Webb, R.A.F.V.R., No. 100 Sqn.
W/O. T. Bowyer, R.A.F.V.R., No. 61 Sqn.
W/O. R. Lawson, R.A.F.V.R., No. 9 Sqn.
W/O. (now P/O.) J. A. Lewis, R.A.F., No. 61 Sqn.
W/O. J. T. Stanton, D.F.M., R.A.F.V.R., No. 97 Sqn.
F/O. R. Y. Kenyon, R.A.A.F., No. 207 Sqn.
F/O. J. C. King, R.A.A.F., No. 431 (R.C.A.F.) Sqn.
P/O. F. W. Blake, R.A.A.F., No. 207 Sqn.
P/O. A. J. C. Croome, R.A.A.F., No 156 Sqn.
P/O. C. W. Lacy, R.A.A.F., No. 97 Sqn.
P/O. W. McC. Mitchell, D.F.M., R.A.A.F., No. 100 Sqn.
F/O. D. R. Simpson, R.A.A.F., No. 149 Sqn.
P/O. J. H. Wilkinson, R.A.A.F., No. 83 Sqn.
W/O. C. B. Lynch, R.A.A.F., No. 460 (R.A.A.F.) Sqn.
W/O. G. W. Morrey, R.A.A.F., No. 50 Sqn.
W/O. (now P/O.) R. H. White, R.A.A.F., No. 460 (R.A.A.F.) Sqn.
F/O. C. E. Siddall, R.C.A.F., No. 419 (R.C.A.F.) Sqn.
F/O. J. R. Soutar, R.C.A.F., No. 429 (R.C.A.F.) Sqn.
F/O. D. F. Thorn, R.C.A.F., No. 77 Sqn.
F/O. T. C. Walker, R.C.A.F., No. 51 Sqn.
P/O. R. J. Booth, D.F.M., R.C.A.F., No. 100 Sqn.
P/O. J. F. Dunlop, R.C.A.F., No. 166 Sqn.
P/O. H. C. Eyjolfson, R.C.A.F., No. 419 (R.C.A.F.) Sqn.
P/O. W. J. Wood, R.C.A.F., No. 102 Sqn.
W/O. J. St. C. Manson, R.C.A.F., No. 10 Sqn.
W/O. C. A. Russell, R.C.A.F., No. 83 Sqn.
P/O. A. E. Nicklin, R.N.Z.A.F., No. 57 Sqn.
Wing Cdr. N. de W. Boult, A.F.C., R.A.F.O., No. 180 Sqn.
Wing Cdr. M. T. Maw, R.A.F.O., No. 640 Sqn.
Wing Cdr. A. C. Stewart, R.A.F.O.
Sqn. Ldr. R. H. C. Burwell, R.A.F.O., No. 144 Sqn.
Sqn. Ldr. F. G. Grant, R.C.A.F., No. 438 (R.C.A.F.) Sqn.
Sqn. Ldr. R. R. Mitchell, R.A.F., No. 33 Sqn.
Sqn. Ldr. H. H. Norsworthy, R.C.A.F., No. 439 (R.C.A.F.) Sqn.
Sqn. Ldr. W. H. Pentland, R.C.A.F., No. 440 (R.C.A.F.) Sqn.
Sqn. Ldr. D. H. Smith, R.A.A.F., No. 453 (R.A.A.F.) Sqn.
Flt. Lt. A. C. Leigh, D.F.M., R.A.F.V.R., No. 129 Sqn.
Flt. Lt. E. R. Murphy, R.A.F.V.R., No 264 Sqn.
Flt. Lt. R. S. Nash, R.A.F.V.R., No. 91 Sqn.
Flt. Lt. A. F Pavey, R.A.F.V.R., No. 122 Sqn.
Flt. Lt. J. K. B. Purves, R.C.A.F., No. 21 Sqn.
Flt. Lt. P. F. Steib, R.A.F.V.R., No. 122 Sqn.
Flt. Lt. H. P. M. Zary, R.C.A.F., No. 421 (R.C.A.F.) Sqn
Flt. Lt. P. F. L. Hall, R.N.Z.A.F., No. 488 (N.Z.) Sqn.
F/O. L. D'A. Marriott, R.A.F.V.R., No. 488 (N.Z.) Sqn.
Flt. Lt. F. D. A. Ainsley, R.A.F.V.R., No. 640 Sqn.
Flt. Lt. H. P. Lagace, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
Flt. Lt. V. A. Lancaster, R.A.A.F., No. 453 (R.A.A.F.) Sqn.
Flt. Lt. S. A. Windmill, R.A.F.V.R., No. 158 Sqn.
F/O. R. L. J. Barbour, R.A.F.V.R., No. 264 Sqn.
F/O. G. Paine, R.A.F.V.R., No. 264 Sqn.
F/O. P. de L. Brooke, R.A.F.V.R., No. 264 Sqn.
F/O. J. D. Cooper, R.A.F.V.R., No. 158 Sqn.
F/O. L. Evans, R.A.F.V.R., No. 578 Sqn.
F/O. R. E. Jones, R.A.F.V.R., No. 455 (R.A.A.F.) Sqn.
F/O. A. R. Osment, R.N.Z.A.F., No. 489 (N.Z.) Sqn.
F/O. W. G. Phelan, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
F/O. M. F. Southgate, R.A.F.V.R., No. 455 (R.A.A.F.) Sqn.
F/O. F. I. Rowe, R.C.A.F., No. 434 (R.C.A.F.) Sqn.
P/O. E. G. Avery, R.A.F.V.R., No. 158 Sqn.
P/O. G. A. Bassett, R.C.A.F., No. 428 (R.C.A.F.) Sqn.
P/O. R. V. Clarkson, R.A.A.F., No. 158 Sqn.
P/O. R. S. Cripps, R.A.F.V.R., No. 158 Sqn.
P/O. R. E. Crockett, R.A.F.V.R., No. 640 Sqn.
P/O. J. Double, R.A.F.V.R., No. 166 Sqn.
P/O. A. B. C. Forrester, R.A.A.F., No 640 Sqn.
P/O. W. H. Golding, R.C.A.F., No. 57 Sqn.
P/O. R. B. McCullough, R.C.A.F., No 434 (R.C.A.F.) Sqn.
P/O. L. Neilson, R.A.F.V.R., No. 158 Sqn.
P/O. J. C. Oram, R.A.A.F., No. 626 Sqn.
P/O. C. R. Vincent, R.C.A.F., No. 425 (R.C.A.F.) Sqn.
P/O. M. Wyllie, R.A.F.V.R., No. 158 Sqn.
W/O. C. McLeod, R.C.A.F., No. 408 (R.C.A.F.) Sqn.
P/O. W. A. Daigleish, R.C.A.F., No. 156 Sqn.
Wing Cdr. J. Woodroffe, R.A.F.O.
P/O. P. B. Ormiston.
Sqn. Ldr. J. G. Rees, R.A.A.F., No. 51 Sqn.
Flt. Lt. A. G. Burgess, R.A.F.V.R., No. 180 Sqn.
Flt. Lt. P. H. Finley, R.A.A.F., No. 466 (R.A.A.F.) Sqn.
P/O. R. J. Evans, R.A.A.F., No. 466 (R.A.A.F.) Sqn.
Flt. Lt. J. H. Marks, R.A.F.V.R., No 625 Sqn.
Flt. Lt. B. K. McDonald, R.C.A.F., No. 514 Sqn.
F/O. A. A. Duchesnay, R.C.A.F., No. 10 Sqn.
P/O. R. N. Hansell, R.A.F.V.R., No 300 Sqn.
P/O. G. H. J. Leonard, R.A.F.V.R., No. 158 Sqn.
P/O. D. R. Cromarty, R.A.F.V.R., No. 158 Sqn
P/O. J. F. G. Stonham, R.A.F.V.R., No. 150 Sqn
W/O. I. MacDonald, R.A.F.V.R.
Sqn. Ldr. I. A. March, R.C.A.F., No. 410 Sqn.



UPSETTING THE TIMETABLE: An India-based Liberator about to take off for an attack on the Bangkok-Moulmein railway. This is the first R.A.F. Liberator picture to show 0·5in. machine-guns in all turrets.

Flt. Lt. K. M. EVOLFSON, R.C.A.F., No. 410 Sqn.
Sqn. Ldr. R. C. PARGETER, R.A.F.V.R., No. 29 Sqn.
Flt. Lt. R. L. FELL, R.A.F.V.R., No. 29 Sqn.
Flt. Lt. F. E. EMENY, R.C.A.F., No. 15 Sqn.
Flt. Lt. J. INWARD, R.A.F., No. 578 Sqn.
F/O. W. J. BANKS, R.C.A.F., No. 412 (R.C.A.F.) Sqn.
F/O. J. S. CHRISTIE, R.A.F.V.R., No. 410 Sqn.
F/O. G. W. E. WOOLLEY, R.A.F., No. 254 Sqn.
F/O. E. W. FOX, R.A.F.V.R., No. 578 Sqn.
F/O. J. E. GIBBERD, R.A.A.F., No. 61 Sqn.
P/O. D. R. C. JAMIESON, R.C.A.F., No. 412 (R.C.A.F.) Sqn.
P/O. N. L. MERRETT, R.A.A.F., No. 609 Sqn.
P/O. K. G. SLADE-BETTS, R.A.F.V.R., No. 3 Sqn.
P/O. J. N. THORNE, R.A.F.V.R., No. 122 Sqn.
W/O. D. GOSLING, R.A.F.V.R., No. 604 Sqn.
F/O. J. M. MCRAE, R.C.A.F., No. 162 (R.C.A.F.) Sqn.
W/O.2 J. J. C. BERGEUIN, R.C.A.F., No. 162 (R.C.A.F.) Sqn.
F/O. W. B. TILLEY, R.A.A.F., No. 10 (R.A.A.F.) Sqn.
F/O. R. W. G. VAUGHAN, R.A.F.V.R., No. 210 Sqn.
Sqn. Ldr. G. H. BRIGGS, R.A.F., No. 298 Sqn.
Sqn. Ldr. W. H. IRESON, R.A.F.V.R., No. 130 Sqn.
Sqn. Ldr. L. F. MIDDLETON, R.A.F.V.R., No. 230 Sqn.
Sqn. Ldr. A. L. WIGGINS, D.S.O., R.A.A.F., No. 455 (R.A.A.F.) Sqn.
Flt. Lt. Y. R. W. LOVEGROVE, R.A.F., No. 229 Sqn.
Flt. Lt. J. RAND, R.A.F.V.R., No. 230 Sqn.
F/O. V. N. VERNEY, R.A.A.F., No. 230 Sqn.
Flt. Lt. J. A. S. CRUMP, R.A.F., No. 644 Sqn.
F/O. J. O. BIRCH, R.C.A.F., No 103 Sqn.
F/O. T. L. STEELE, R.C.A.F., No. 419 (R.C.A.F.) Sqn.
F/O. D. W. MILLER, R.A.F.V.R., No. 644 Sqn.
F/O. A. W. STEPHENS, R.C.A.F., No. 299 Sqn.
F/O. C. E. ANSLEY, R.N.Z.A.F., No. 103 Sqn.
F/O. N. R. WISHART, R.A.F.V.R., No. 614 Sqn.
P/O. R. G. BULLIVANT, R.C.A.F., No. 452 (R.C.A.F.) Sqn.
P/O. C. B. HAMILTON, R.A.F.V.R., No. 85 Sqn.
P/O. J. IRVINE, R.A.F.V.R., No. 605 Sqn.
Flt. Lt. C. A. WHYATT, R.A.F.V.R., No. 252 Sqn.
Flt. Lt. E. T. BROUGH, R.N.Z.A.F., No. 182 Sqn.
F/O. C. S. COSSAR, R.A.F.V.R., No. 247 Sqn.
F/O. C. J. KIRKPATRICK, R.C.A.F., No. 406 (R.C.A.F.) Sqn.
F/O. D. H. SUTHERLAND, R.A.F.V.R., No. 247 Sqn.
Flt. Lt. A. M. YELLAND, R.A.A.F., No. 680 Sqn.
Flt. Lt. R. M. TURNER, R.A.A.F., No. 150 Sqn.
F/O. B. A. BRETHERTON, R.A.A.F., No. 255 Sqn.
F/O. R. W. LEWIS, R.A.A.F., No. 37 Sqn.
Sqn. Ldr. J. R. A. BAILEY, R.A.F.V.R., No. 600 Sqn.
Sqn. Ldr. W. D. BOXWELL, R.A.F.O., No. 150 Sqn.
Sqn. Ldr. L. L. HARLAND, R.A.F.V.R., No. 55 Sqn.
Sqn. Ldr. D. B. WEST, R.A.F.O., No. 256 Sqn.
Flt. Lt. C. B. BLACK, R.A.F.V.R., No. 6 Sqn.
Flt. Lt. R. BOOTHMAN, R.A.F.V.R.
Flt. Lt. R. H. LANGDON-DAVIES, R.A.F.V.R., No. 6 Sqn.
Flt. Lt. F. J. NICOLL, R.A.F.V.R., No. 6 Sqn.
Flt. Lt. A. G. ROBINSON, R.A.F.V.R., No. 55 Sqn.
Flt. Lt. J. WOOLER, R.A.F.V.R., No. 145 Sqn.
Flt. Lt. D. S. PINKS, R.A.F.V.R., No. 255 Sqn.
F/O. T. E. JOHNSON, R.A.F.V.R., No. 255 Sqn.
F/O. C. F. J. WATTS, A.F.C., R.A.F., No. 104 Sqn.
P/O. D. W. E. ALLUM, R.A.F.V.R., No. 150 Sqn.
P/O. M. NOBLE, R.A.F.V.R., No. 255 Sqn.
W/O. E. D. BOYD, R.A.F.V.R., No. 18 Sqn.
W/O. J. S. SIMMONS, R.A.F.V.R., No. 249 Sqn.
F/O. J. S. G. MURPHY, R.A.A.F., No. 104 Sqn.
F/O. M. E. THOMPSON, R.A.A.F., No. 150 Sqn.
P/O. E. J. MATTINGLEY, R.A.F., No. 150 Sqn.
W/O. W. K. PATERSON, R.A.A.F., No. 39 Sqn.
Flt. Lt. F. A. ASHBAUGH, R.C.A.F., No. 104 Sqn.
Flt. Lt. D. L. G. TURVEY, R.C.A.F., No. 417 (R.C.A.F.) Sqn.
P/O. R. WILSON, R.C.A.F., No. 13 Sqn.
Maj. R. M. COULL, S.A.A.F., No. 12 (S.A.A.F.) Sqn.
Capt. A. J. BIDEN, S.A.A.F., No. 1 (S.A.A.F.) Sqn.
Capt. H. O. M. ODENDAAL, S.A.A.F., No. 5 (S.A.A.F.) Sqn.
Lt. A. MCARAVEY, S.A.A.F., No. 21 (S.A.A.F.) Sqn.
Lt. G. P. V. MORUM, S.A.A.F., No. 55 Sqn.
Lt. A. L. VERSFELD, S.A.A.F., No. 12 (S.A.A.F.) Sqn.
Wing Cdr. P. H. LEE, R.A.F.O.
Sqn. Ldr. R. N. H. COURTNEY, R.A.F.O., No. 113 Sqn.
Sqn. Ldr. H. C. RANDALL, R.A.F., No. 248 Sqn.
Sqn. Ldr. D. J. T. SHARP, R.N.Z.A.F., No. 11 Sqn.
Flt. Lt. G. H. THRING, R.C.A.F., No. 620 Sqn.
Flt. Lt. R. G. WILLIAMS, R.A.F.V.R., No. 7 Sqn.
Flt. Lt. A. F. WILSON, R.A.F.V.R., No. 154 Sqn.
F/O. H. L. BARKER, R.A.F.V.R., No. 218 Sqn.
F/O. G. H. DENNIS, R.A.F.V.R., No. 218 Sqn.
P/O. S. R. MORRISON, R.C.A.F., No. 408 (R.C.A.F.) Sqn.
W/O. W. G. FORSBERG, R.C.A.F., No. 428 (R.C.A.F.) Sqn.
Sqn. Ldr. H. F. CARTER, R.A.F.V.R., No. 216 Sqn.

Conspicuous Gallantry Medal (Flying)

Sgt. P. ENGBRECHT, R.C.A.F., No. 424 (R.C.A.F.) Sqn.—As mid-upper gunner this airman has participated in several sorties and has proved himself to be an exceptionally cool and confident member of aircraft crew. On one occasion during a sortie his aircraft was subjected to fourteen separate attacks by fighters. In the ensuing fights Sgt. Engbrecht defended his aircraft with great skill, and two of the attackers fell to his guns. In June, 1944, he took part in an attack on a target in Northern France. On the return flight his aircraft was attacked on two occasions by fighters. Sgt. Engbrecht engaged the enemy aircraft with deadly effect each time, and his brilliant shooting caused their destruction. His feats have been worthy of the greatest praise.

STREAMLINED MODEL: Loading one of the new armour-piercing 12,000 lb. bombs into a Lancaster III. A new type of bomb hoist is in use.

Distinguished Flying Medal

Flt. Sgt. R. A. SMITH, R.C.A.F., No. 626 Sqn. (For citation see Flt. Lt. W. LeR. Foote, D.S.O.)
Sgt. R. S. ROBERTS, R.A.F.V.R., No. 7 Sqn.
Flt. Sgt. J. E. GIFFORD, R.A.F.V.R., No. 18 Sqn.
Flt. Sgt. S. J. BARKER, R.A.F.V.R., No. 18 Sqn.
Flt. Sgt. L. W. RIDDLE, R.A.F.V.R., No. 7 Sqn.
Sgt. R. BOSTOCK, R.A.F.V.R., No. 7 Sqn.
Sgt. B. A. LOOSLEY, R.A.F.V.R., No. 7 Sqn.
Sgt. R. F. CROMARTY, R.C.A.F., No. 162 (R.C.A.F.) Sqn.
Flt. Sgt. L. E. COOKE, R.A.A.F., No. 10 (R.A.A.F.) Sqn.
Flt. Sgt. F. C. BRICE, R.A.F.V.R., No. 578 Sqn.
Flt. Sgt. R. F. WEBBER, R.A.F., No. 250 Sqn.
Flt. Sgt. (now P/O.) F. KERSHAW, R.A.F.V.R., No. 158 Sqn.
Flt. Sgt. D. J. PEGG, R.A.A.F., No. 103 Sqn.
Flt. Sgt. D. R. PENNY, R.C.A.F., No. 432 (R.C.A.F.) Sqn.
Flt. Sgt. J. A. PHILLIS, R.C.A.F., No. 419 (R.C.A.F.) Sqn.
Flt. Sgt. D. W. N. SMITH, R.A.A.F., No. 640 Sqn.
Sgt. F. F. J. BUTLER, R.A.F.V.R., No. 640 Sqn.
Sgt. R. F. DAWSON, R.A.F.V.R., No. 103 Sqn.
Sgt. V. C. YATES, R.A.F.V.R., No. 103 Sqn.
Sgt. J. NORMAN, R.A.F.V.R., No. 419 (R.C.A.F.) Sqn.
Sgt. R. SUMMERS, R.A.F.V.R., No. 103 Sqn.
Flt. Sgt. I. A. C. BLUE, R.A.F.V.R., No. 182 Sqn.
Flt. Sgt. J. S. GARNETT, R.A.F.V.R., No. 210 Sqn.

THE KING has been graciously pleased to approve the following awards:—

O.B.E. (Mil.)

Wing Cdr. R. T. CORRY, A.A.F.—In July, 1944, an aircraft developed engine trouble immediately after taking off and the pilot, after having jettisoned the torpedo, returned to base. When attempting to land, the aircraft burst into flames. The ambulance and fire tender were quickly on the scene, and Wing Cdr. Corry, who was on flying control duty, arrived a few seconds later. He observed the pilot standing in his cockpit which was enveloped in flames. Ignoring the danger from the exploding cannon shells and petrol tanks, and believing he faced a further risk from the explosion of the torpedo, which he thought was still on board, Wing Cdr. Corry climbed on to the burning wing in an endeavour to extricate the pilot. The heat became intense and a major explosion was expected at any moment, but this did not deter Wing Cdr. Corry. He persisted in his rescue efforts until, having been overcome by the fumes and heat, he fell backwards off the wing. He was then assisted away a distance of about 15 yards from the crash. Although unable to see clearly, Wing Cdr. Corry endeavoured to repeat his previous attempt; there was, however, no hope of effecting a rescue. Wing Cdr. Corry sustained burns to his face and suffered from shock in trying to effect a rescue. The courage and devotion to duty displayed by this officer were of a very high standard.

Act. Sqn. Ldr. D. D. MORRELL, M.B., B.S., R.A.F.V.R.—In June, 1944, a Liberator aircraft crashed into the sea some distance from the shore at Littlestone and an airman of the U.S.A.A.F. was trapped in the nose of the aircraft which quickly became almost submerged. Sqn. Ldr. Morrell immediately waded into the surf and attempted to swim towards the Liberator, but was unable to reach it owing to the very heavy sea and strong current. He then commandeered an amphibious vehicle which was passing along the water front and eventually he was conveyed to the side of the Liberator. By this time the water was up to the shoulders of the trapped airman and he was suffering considerably. Displaying outstanding initiative and courage and ignoring the grave possibility of being trapped himself, Sqn. Ldr. Morrell dived to the bottom of the fuselage. By using great force Sqn. Ldr. Morrell tore away a part of the aircraft which then enabled him to release the airman. Immediately afterwards he administered morphia to the suffering airman. All this took place inside the fuselage. Sqn. Ldr. Morrell finally succeeded in dragging the airman clear of the aircraft and, with assistance, he got him aboard the waiting craft. Sqn. Ldr. Morrell's outstanding courage and initiative saved the airman's life.

M.B.E. (Mil.)

Flt. Lt. F. T. KNIGHT, late R.A.F.O.

P/O. E. M. STITCHER, R.A.F.V.R.—This officer was performing embarkation duties in the Port of London in June, 1944, when a flying bomb exploded where railway waggons, loaded with petrol, ammunition and other stores destined for Normandy were closely stabled. Although his shoes had been burnt and his clothing had become soaked with petrol, with complete disregard for his own safety he immediately proceeded, with the help of a shunter of the P.L.A. staff, to uncouple the burning waggons and isolate them. He remained in command of the situation until it was completely under control, personally assisting in the movement of dangerously burning trucks, thereby isolating and saving large consignments of petrol, explosives and equipment. By his devotion to duty, regardless of his own safety, he was primarily responsible for confining the damage to those trucks directly involved in the explosion.

W/O. D. G. BROWNLEE, R.C.A.F., No. 13 Sqn.—W/O. Brownlee was the gunner of a Baltimore aircraft which, on returning from a night reconnaissance in May, 1944, crashed on the beach near Termoli. The aircraft broke in two between the turret and the wireless operator's cabin and the front portion caught fire. With assistance from an Army officer who was on the beach, W/O. Brownlee climbed out of the turret, and, although suffering from severe shock and bruises, he approached the blazing front portion of the wreckage. Disregarding the risk of exploding petrol tanks, W/O. Brownlee and the Army officer successfully extricated the wireless operator/air gunner and carried him clear. While this was being done ammunition was exploding and one of the petrol tanks blew up. W/O. Brownlee then returned to the wreckage to rescue the pilot, but, owing to the fierceness of the fire, had to abandon the attempt. Although considerably shaken when he had made his own escape, he showed great bravery and devotion to duty.

Military Cross

Act. Flt. Lt. C. G. CURTIS, R.A.F.V.R.

Air Force Cross

Flt. Lt. D. FOPP, R.A.F.V.R.—On July 26th, 1944, Flt. Lt. Fopp was acting as instructor during a night flying test, when his aircraft collided with

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another aircraft, tearing away the whole of the starboard elevator and about one-third of the starboard tail plane. In addition, the port tail plane was damaged and all but one foot of the port elevator torn away. The aircraft became uncontrollable. Flt. Lt. Fopp made preparations to abandon the aircraft, but by careful piloting was able to regain control and fly it back to the airfield. He lowered the wheels and made preparations for landing, but the aircraft went out of control again. With great skill and presence of mind, he raised the flaps and, regaining some degree of control, effected a landing, at the same time succeeding in preventing a blockage of the runway. It was then found that the tail wheel had also been ripped away in the collision. Throughout the whole incident, this officer showed the greatest coolness and skill and his action was entirely responsible for the safe landing of the aircraft and its occupants.

Roll of Honour

Casualty Communique No. 436.

THE Air Ministry regrets to announce the following casualties on various dates. The next of kin have been informed. Casualties "in action" are due to flying operations against the enemy; "on active service" includes ground casualties due to enemy action, non-operational flying casualties, fatal accidents and natural deaths.

Of the names in this list, 83 are second entries giving later information of casualties published in earlier lists.

Royal Air Force

KILLED IN ACTION.—Sgt. W. A. Burnett; Sgt. R. J. Ferrans; Flt. Sgt. R. J. T. Hawkes; Sgt. J. K. Horn; Sgt. T. Horwood; F/O. F. G. D. O'Callaghan; Sgt. C. T. Sayer; Sgt. D. J. Smith; P/O. P. A. Taylor; P/O. C. J. Todd.

PREVIOUSLY REPORTED MISSING, NOW PRESUMED KILLED IN ACTION.—Sgt. D. J. E. Adams; Act. Flt. Lt. R. A. P. Allsebrook, D.S.O., D.F.C.; Flt. Sgt J. H. Barr; Sgt. J. Bullock; Sgt. I. N. F. Cameron; Sgt. P. B. Cameron; W/O. P. F. Chesterton; Sgt. F. G. Chilcott; Flt. Sgt. R. G. Cole; Sgt. L. F. Collins; Sgt. H. W. F. Cooke; Sgt. F. W. Cornwell; Sgt. E. J. Cumming; Flt. Sgt. J. Curry; Flt. Sgt. R. W. Dando; Flt. Sgt. F. H. Dennis; Act. Flt. Lt. T. R. Dobson; F/O. P. R. Driver; Sgt. P. J. Elson; Sgt. P. R. Fox; Sgt. T. J. Gleeson; Flt. Sgt. C. Golby; Sgt. H. E. St. H. Goom; Sgt. E. J. Hall; Sgt. D. C. Harris; Sgt. R. L. Harris; Sgt. R. Hill; F/O. F. W. Holland; F/O. G. Holt; Sgt. L. E. Hughes; Sgt. J. S. Izatt; Sgt. C. R. Jackson; Sgt. E. J. E. Jarman; Sgt. D. A. Jones; Sgt. F. J. Jones; Sgt. L. C. Jordon; Sgt. D. W. Kemp; Sgt. B. Kirkham; Flt. Sgt. L. J. Lowndes; P/O. A. McGregor; Sgt. W. F. MacLaren; P/O. A. Mair; P/O. L. F. Merricks; Sgt. R. A. Metcalfe; Sgt. L. W. Nichols; Sgt. T. J. Pounder; Flt. Sgt. H. Robertson; Sgt. W. A. Robertson; F/O. R. D. Rosser; Sgt. A. Rostron; Sgt. E. S. Sheppard; Sgt. A. H. Simpkin; Sgt. W. T. Smith; Sgt. J. Stonehouse; Flt. Sgt. J. P. Strachan; Sgt. R. E. Tate; Sgt. P. C. Taylor; Sgt. R. M. Telfer; Sgt. J. Tunley; P/O. S. T. Wariner; Sgt. N. E. Weighell, P/O. G. W. Wilson.

WOUNDED OR INJURED IN ACTION.—Flt. Sgt. J. Condon; Sgt. R. J. Tweats.

DIED OF WOUNDS OR INJURIES RECEIVED IN ACTION.—Sgt. H. R. Tait.

MISSING, BELIEVED KILLED IN ACTION.—P/O. G. A. Baker; F/O. P. W. Ball; Flt. Sgt. R. G. Bishop; Sgt. P. Bowen-Chennell; Flt. Sgt. J. A. Buckley; Sgt. H. J. Cossey; Sgt. A. C. Dalman; Act. Flt. Lt. F. W. Gallagher, D.S.O.; Sgt. C. E. Hansford; F/O. R. S. Mallett, D.F.C.; Sgt. G. H. Moggridge; Sgt. A. J. Osbourn; Sgt. W. R. Parkinson; Flt. Sgt. D. G. Townsend; Sgt. J. R. Wallis; Sgt. H. W. J. Yardley.

MISSING.—Flt. Sgt. G. R. Ansdell; Sgt. A. Armstrong; F/O. B. J. Atkin; Sgt. K. V. Barnes; F/O. A. F. Bayley; Act. Flt. Lt. R. A. W. Beaumont; Sgt. W. D. Belshaw; P/O. L. B. Benson; Flt. Sgt. S. R. Bore; Sgt. D. Brooks; Flt. Sgt. A. S. H. Brown; Sgt. J. W. Carey; P/O. D. H. Carr; Flt. Sgt. L. C. Carter; Flt. Sgt. S. Cater; Sgt. J. W. Chaplin; Flt. Sgt. M. A. Clark; Sgt. J. B. Cowie; P/O. R. H. Crag; Act. Wing Cdr. M. Crocker, D.F.C.; Flt. Sgt. A. C. Croft; P/O. M. A. H. Davis; Sgt. F. Dawson; Sgt. R. E. De Casagrande; Sgt. A. E. Dicken; Sgt. J. H. Donovan; F/O. K. Dutton; P/O. D. G. English; F/O. D. J. Faires; Sgt. H. K. Feltham; Flt. Sgt. E. C. Fox; Sgt. T. D. S. Fraser; Flt. Sgt. G. E. Freeman; P/O. E. G. Gittings; Sgt. C. A. Glew; Sgt. C. W. Goodwin; Flt. Sgt. J. W. Green; Sgt. A. D. Griffin; F/O. J. L. Griffith; P/O. M. A. Guilfoyle; F/O. F. C. H. Gunn; P/O. G. P. Guy; P/O. J. L. Halpin; Sgt. A. J. Handford; Sgt. D. W. E. Hardy; Sgt. C. C. Hatter; Flt. Sgt. S. Hawes; Sgt. T. E. Hayes; Sgt. R. Heasman; Sgt. G. G. P. Hine; Sgt. C. C. Holden; F/O. R. H. Holmes; P/O. R. C. Hooper, D.F.C.; P/O. L. Hunt; W/O. C. H. T. Hurley; Sgt. J. Jackson; Flt. Sgt. L. F. Jackson; Sgt. A. L. Jamieson; Sgt. J. O. Johnston; Sgt. R. Jones; Sgt. T. M. Jones; Sgt. D. F. Jordin; Sgt. P. H. Kano; Sgt. A. M. Kean; Flt. Sgt. E. J. Kemish; Flt. Sgt. R. G. H. Kirk; Sgt. G. G. Leighton; Flt. Sgt. M. Lewin; Sgt. R. W. Lloyd; Flt. Sgt. I. G. Long; Sgt. R. Lowing; Sgt. R. C. McArthur; Flt. Sgt. J. J. McClurg; P/O. D. J. McCrudden; Sgt. J. MacFie; F/O. L. J. MacKinnon; Sgt. G. R. McKnight; Sgt. J. Mannion; Sgt. A. R. Marwood; Act. Flt. Lt. A. E. A. Matthews, D.F.C.; F/O. J. R. Maunsell; Flt. Sgt. H. J. Middleditch; P/O. M. B. Millward; Sgt. J. Moffat; Sgt. A. T. T. Morrell; Flt. Sgt. C. G. Morton; Flt. Sgt. A. D. Naysmith; Act. Flt. Lt. T. Neison, D.F.C.; Sgt. D. Nelson; Flt. Sgt. R. Nelson; Sgt. D. C. Newman; Flt. Sgt. D. O'Beirne; Sgt. D. W. Palmer; Flt. Lt. H. Pearson; Sgt. J. D. Pepper; Sgt. J. Pettit; Sgt. N. G. V. Pettit; Sgt. M. J. L. Priest; Sgt. C. G. Reeve; Sgt. K. F. Rice; Flt. Sgt. D. Richardson; Flt. Sgt. P. C. Robins; Sgt. T. A. Roby; P/O. A. R. Ross; Sgt. K. W. Sansom; Flt. Lt. D. C. Saunders; Flt. Sgt. J. W. Scholefield; Sgt. R. L. Scott; Flt. Sgt. R. P. Scott; Flt. Sgt. H. A. Shaw; Sgt. A. Shaw; Sgt. J. Sheffield; W/O. C. H. Sheridan; P/O. A. W. Shinn, D.F.C.; Flt. Sgt. K. J. Skinner; F/O. T. T. Smart, D.F.C.; Sgt. D. V. G. Smith; Sgt. C. Southworth; F/O. J. B. Stanley; Flt. Lt. R. F. Starnes, D.F.C.; Flt. Sgt. D. MacG. Steven; Sgt. D. F. O. Synnott; Sgt. P. D. Taylor; Flt. Sgt. J. Thompson; Sqn. Ldr. R. H. Thompson; Sgt. K. Waddington; Sgt. A. J. Walker; Flt. Sgt. J. E. G. Whittome; Flt. Sgt. E. T. Williams; P/O. G. M. Williams; Act. Sqn. Ldr. G. H. Wilson, D.S.O., D.F.C.; P/O. J. R. S. Wood; F/O. J. R. Worthington, D.F.C.

KILLED ON ACTIVE SERVICE.—Flt. Lt. J. E. Barry; Sgt. A. N. Bird; Sgt. L. W. Brown; Sgt. J. S. Cherry; F/O. W. S. Donovan, D.F.M.; P/O. F. J. Fisk; Sgt. S. Green; F/O. G. Hopkins; F/O. E. E. Hursey; F/O. E. B. J. Jensen; Flt. Sgt. J. C. Lyle; A/C.2 M. MacLeod; Sgt. R. Minke; L.A/C. S. W. Newson; L.A/C. R. C. Parr; Flt. Sgt. F. N. Powell; Sgt. G. Royall; A/C.2 J. S. Scoffin; Sgt. E. Smallbone; F/O. G. N. C. Smyth; F/O. E. C. Splane; A/C.2 J. R. Webb; A/C.2 C. H. Whitwell; A/C.2 W. F. Witt; Sgt. B. H. Yates; A/C.2 H. J. B. Young.

WOUNDED OR INJURED ON ACTIVE SERVICE.—Sqn. Ldr. S. H. Bell; L.A/C. C. Chapman; L.A/C. L. E. Foxwell; L.A/C. A. S. Spraggon.

DIED OF WOUNDS OR INJURIES RECEIVED ON ACTIVE SERVICE.—F/O. N. C. Brown; Cpl. F. E. J. Day.

DIED ON ACTIVE SERVICE.—L.A/C. A. F. Askew; Act. W/O. G. W. Harwood; W/O. H. W. Howes; L.A/C. A. N. Slack; L.A/C. R. Whetren; W/O. C. H. Wilkinson.

PREVIOUSLY REPORTED MISSING, NOW REPORTED PRISONER OF WAR.—Sgt. H. Ball; Flt. Sgt. G. P. Johnson; Sgt. G. C. Prince; F/O. R. L. Woods.

Women's Auxiliary Air Force

WOUNDED OR INJURED ON ACTIVE SERVICE.—Cpl. K. M. Alexander; L.A/CW. M. E. Wilkinson; Cpl. F. H. Wilson.

Royal Australian Air Force

KILLED IN ACTION.—W/O. R. A. B. Blumer; F/O. L. E. Bowes.

PREVIOUSLY REPORTED MISSING, BELIEVED KILLED IN ACTION, NOW PRESUMED KILLED IN ACTION.—F/L. Sgt. J. Price; Flt. Sgt. D. J. Rowan; Act. Flt. Lt. J. P. H. Wallace.

PREVIOUSLY REPORTED MISSING, NOW PRESUMED KILLED IN ACTION.—Flt. Sgt. A. B. Cumming; F/O. M. R. Good; Flt. Sgt. G. S. Hotchkis; Flt. Sgt. A. F. Loxton; Flt. Sgt. O. J. Lumsden; Flt. Sgt. D. E. Morrison; Flt. Sgt. A. B. Robinson.

MISSING, BELIEVED KILLED IN ACTION.—Flt. Sgt. H. L. Barron.

MISSING.—P/O. J. W. Alcorn; Flt. Sgt. B. R. Barber; Flt. Sgt. G. W. Bateman; W/O. T. F. Beecher; Flt. Sgt. R. K. Begg; P/O. A. A. W. Berryman; Flt. Lt. W. W. Boylson; Flt. Sgt. H. K. Brown; Act. Flt. Lt. R. R. Cowan; P/O. B. Eassie, Flt. Sgt. D. R. Foden; Act. Flt. Lt. J. A. Forrest, Flt. Sgt. J. P. Gwilliam; Flt. Sgt. L. G. L. Hunter; Flt. Sgt. E. L. Johnston; W/O. B. E. Kelly; Flt. Sgt. T. A. Malcolm; W/O. C. B. Manning; P/O. J. F. Martin; Flt. Sgt. L. H. Mason; Flt. Sgt. K. C. Mills; P/O. R. N. Mills; Flt. Lt. F. D. Moffitt; Flt. Sgt. T. D. Murray; Flt. Sgt. P. F. O'Connell; Flt. Sgt. K. Richardson. P/O. R. E. S. Shearer; Flt. Sgt. A. A. Summers; Flt. Sgt. A. L. West; F/O. S. W. Whitby; Flt. Sgt. J. G. Williams.

KILLED ON ACTIVE SERVICE.—Flt. Sgt. R. G. Lugton.

Royal Canadian Air Force

WOUNDED OR INJURED IN ACTION.—Sgt. A. O. Proudlove.

MISSING, BELIEVED KILLED IN ACTION.—Flt. Sgt. J. E. R. Bowering; F/O. T. Kelley; Sgt. E. D. Kidd; Flt. Sgt. E. N. Kullberg; F/O. L. S. McMurchy; W/O. M. Sherman; F/O. C. Szymanski.

MISSING.—Flt. Sgt. C. H. M. Beaudoin; Sgt. C. D. Boyce; F/O. A. V. D. Corless; P/O. A. D. Creighton; W/O. V. C. Cully; W/O. F. S. Dewis; Flt. Sgt. C. C. Flewelling; Flt. Sgt. E. H. Gochring; Flt. Sgt. G. F. MacGregor; Flt. Sgt. J. L. McKenna; Sgt. J. I. Magoffin; W/O. T. H. Mayne; Sgt. J. F. Mireault; Sgt. M. Morrison; Sgt. D. A. R. Redshaw; W/O. N. T. S. Reed; F/O. B. A. Somers; W/O. J. Sonshine; Flt. Sgt. M. H. Stoner; Flt. Sgt. A. E. C. Thomas.

KILLED ON ACTIVE SERVICE.—Sgt. E. Bunt; Sgt. G. K. Cameron; Sgt. R. S. Cracknell; Sgt. E. A. Crow; Sgt. G. H. Durham; Sgt. G. F. Marchington.

PREVIOUSLY REPORTED MISSING NOW REPORTED PRISONER OF WAR.—P/O. J. N. A. McDonagh; F/O. A. R. McGillivray; P/O. G. W. Sharpe.

Royal New Zealand Air Force

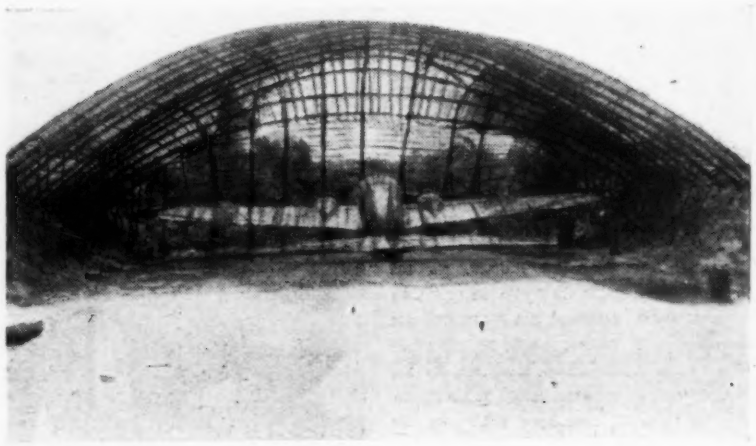
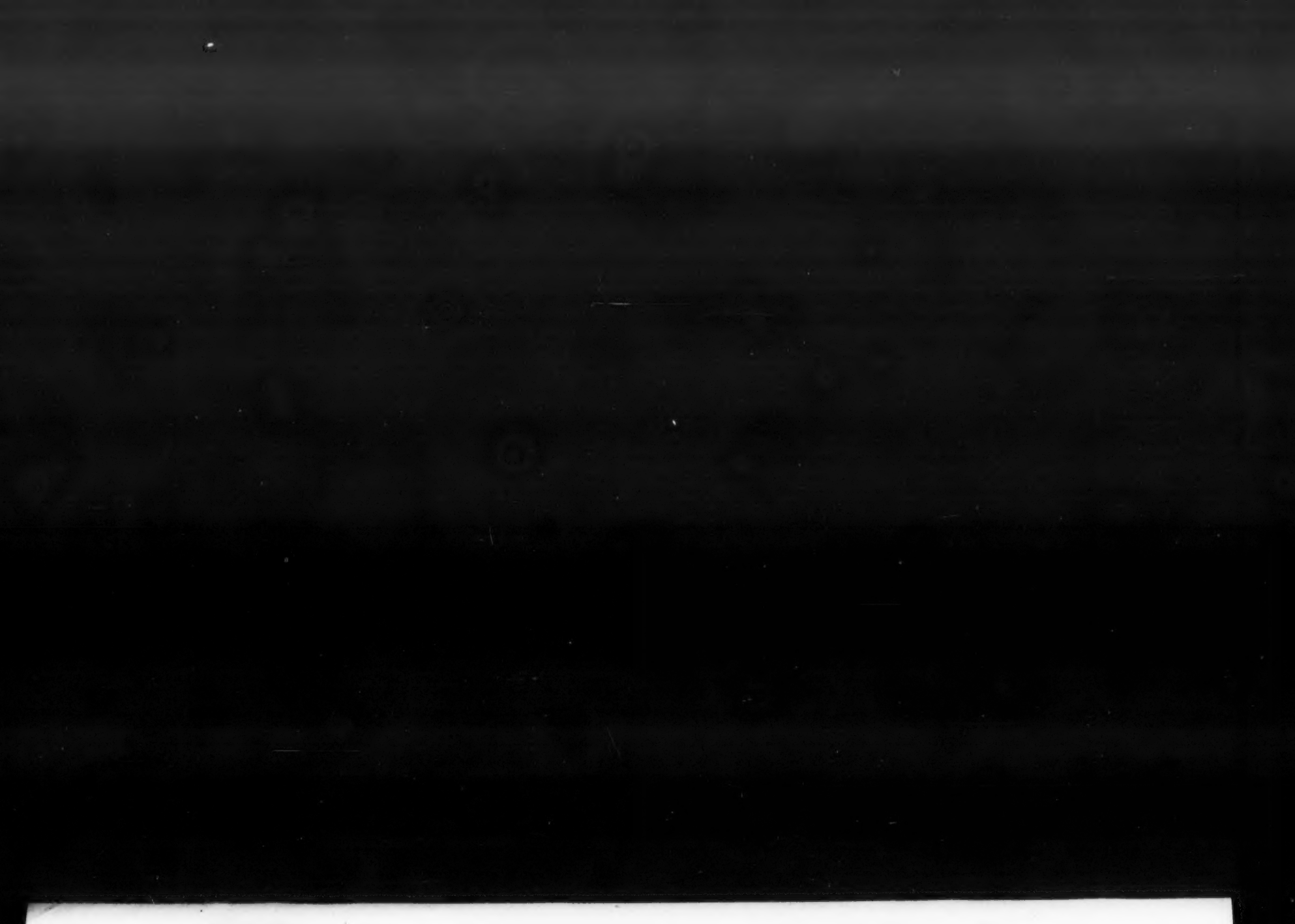
PREVIOUSLY REPORTED MISSING, BELIEVED KILLED IN ACTION, NOW PRESUMED KILLED IN ACTION.—Flt. Sgt. D. Bennett.

PREVIOUSLY REPORTED MISSING, NOW PRESUMED KILLED IN ACTION.—Act. Flt. Lt. J. B. Burnet; W/O. A. V. Douglas.

Official Corrections

Casualty Communiqué No. 434.

Under "MISSING" delete Sgt. L. F. Boness and Sgt. R. P. Irwin.



ANSONS NEVER DIE: An Avro Anson, described as a reconnaissance aircraft, in its bamboo-covered blast bay on a Bengal airfield. The absence of a dorsal turret seems to suggest that enemy fighters are not expected.